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Second Year of the Research and Service Committees

EDITORIAL

THE plan of decentralization of activities of the American Association of Junior Colleges, of which the organization of five standing Committees on Research and Service is a salient feature, is at this writing well along in its second year of operation. The program for the second year was projected by these committees with approval of the central Co-ordinating and Research Committee and of the Board of Directors of the Association at their meetings held at the University of Chicago during the first few days of August. Decisions made at that time concerning the program have been reported at some length both in the *Washington Newsletter* and elsewhere in the *Junior College Journal*. However, because the work of the committees includes not only research but also significant activities designated as "service" not strictly in the realm of research, there may be some point,

even at the risk of repetition, in reviewing, at least sketchily, the main elements of the research program outlined for the second year. In presenting this review, it will be necessary to make some reference to the background of previous activities of the several committees.

A joint project of three committees, those on Curriculum and Adult Education, Administrative Problems, and Teacher Preparation, completed during the first year, involved a large-scale study of status in practices looking to improvement of instruction. During the committee sessions, allocation was made to the several committees of the various aspects of a complete program for improving instruction, and certain of the committees planned to initiate studies toward appraising the practices. Another joint project, in this instance of the Curriculum and Administrative Problems Committees, concerns problems in the library field. This project was regarded so important as to necessitate the creation of a special Library Committee, which has investi-

gated the relative importance of the various library problems and has been authorized to inquire into the possibilities of securing a new list of books and other instructional materials.

In addition, the Committee on Curriculum and Adult Education is at work on certain problems in the area of adult education. Having at hand the results of a poll on the relative importance of numerous problems in this area, the committee planned further inquiry this year on two problems that stood high in the poll, namely, co-ordination and integration of adult-education programs in junior colleges with those of other agencies in the community and the development of criteria for determining the need for adult-education courses. The committee also conferred with a graduate student at the University of Chicago about his plans for a dissertation investigating the impact of pre-professional requirements on the junior-college curriculum for general education.

The Committee on Administrative Problems, in addition to joining in deliberations over problems previously mentioned, considered next steps to be taken in the appraisal of the practices in improving instruction which were allocated to it for further inquiry.

The Committee on Legislation projected a study of desirable legislation at the state level favorable to free public junior colleges. As planned, this study will begin by capitalizing experience concerning desirable legislation in regional committees and will move toward an analysis and appraisal of existing and proposed statutes in all states bearing on junior-college education.

The Committee on Teacher Preparation authorized two investigations. One of these is to be a study of the

status of programs of junior-college teacher preparation in higher institutions of the country. The other is an investigation of junior-college teacher salaries and salary schedules. The second investigation is of a nature to require making it a joint project of this committee and the Committee on Administrative Problems.

The members of the Committee on Student Personnel Problems in attendance at the August meetings favored making two inquiries: one a study of status of relationships of student personnel programs of junior colleges with those of schools below, and the other a preliminary inquiry to identify junior colleges doing significant work in placement and follow-up of students, with the purpose of later making an intensive study of practices in these institutions.

On the whole, this is a substantial program of research for and by the Association. To some it may seem a bit too ambitious, in view of the resources of time and money available, and it would be so without the general and individual cooperation of members of the Association and of other students of the junior college. In his capacity as director of research for the Association, the writer is gratified to note that in considerable part the program is shifting, during this second year, from studies of status and polls of the relative importance of problems to investigations involving evaluation and appraisal.

LEONARD V. KOOS

Guiding Principles in Building Programs

KENNETH E. WISCHMEYER

ARCHITECTURE is man's most intimate and constant environment. Yet few of us realize the influence exerted by our architectural surroundings on our thinking, our dispositions, and our personal fitness to assume our responsibilities in the community. We are prone to disregard these surroundings unless they are exceedingly bad or extremely impressive. Normally, we do not think in terms of whether our physical surroundings could have been so planned and constructed as to increase their usefulness and their desirability and, in turn, to produce more pleasant surroundings conducive to better learning and living.

The responsibility of initiating and carrying out a building program is, therefore, no light undertaking. It is a great responsibility

for the building committee to guide and influence such a program properly. It is a great responsibility for the selected architect to study and execute properly a given set of requirements prepared for a building program. The following list of guiding principles, based on my own experience, will be of value to a building committee in preparing a workable building program. These principles will be discussed separately in the following sequence.

1. Plan with a knowledge of your need.
2. Plan with a knowledge of what has justified this need.
3. Plan for human needs.
4. Plan for flexibility.
5. Plan for the future, acknowledging the value of change.
6. Plan with an eye to the proper use of materials and to the maintenance factor.
7. Plan according to an existing master-plan and consider the relation of the school to the community.
8. Plan in a contemporary manner.
9. Plan with the assistance of qualified professional architects and engineers.

The first of these guiding principles, "Plan with a knowledge of your need," might be taken as a matter of course—a procedure that

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any building committee would follow as a normal approach to any given problem. Yet many a school building has been built, and undoubtedly many more will be built, without a clear picture of the need. All factors contributing to the need of a given structure should be thoroughly analyzed before a program of requirements is formulated. In other words, to put it a little bluntly, *know what you want*. Interview the faculty that uses the building for instructional purposes. Interview the students, and you will be surprised at some of the helpful hints that will be obtained. Do not ignore the custodians, maintenance men, and service help, for they, too, have their own ideas of needed facilities. No building committee, in my opinion, should write down one word about the need requirements without first having made such a survey.

The second guiding principle, "Plan with a knowledge of what has justified this need," is closely related to the first. A building committee should know whether the need will change with new teaching methods and techniques. The justification of need is also closely related to sectional, area, state, metropolitan, urban, or rural master-plans as affected by population shifts, economic factors, and correlation with industrial and commercial requirements. All these factors are important, and all of them should be carefully considered and

analyzed. Many a college building has been built to meet an urgent need requirement, only to have this need dissipate in a few years.

The next guiding principle, "Plan for human needs," seems hardly to require consideration. Yet it is the fundamental of all good architecture, and good architecture means good planning, good designing. The fundamental architectural tradition through the ages has been to plan to meet the human needs for dignity and security, to serve human relationships as they exist close at hand.

That is the great architectural tradition—the satisfying of human needs, not the construction of Gothic, Georgian, Colonial, Spanish, or Tudor English buildings. We must not literally stuff our requirements into stilted forms of unworkable plans merely to satisfy architectural archeology or architectural caprice. We must plan for human needs as these exist for any given problem.

Then we come to the guiding principle, "Plan for flexibility." This is most important. The need requirement should not be limited, shortsighted, or too rigid. It must allow for multiple use of space as required in our ever expanding teaching methods and techniques. We must analyze the use of areas for all types of instruction and investigate how rooms can be rearranged or altered to satisfy a given condition. Too many plans are

made with no view to flexibility and with too many fixed limitations necessarily restricting proper instruction.

Flexibility of planning also joins hands, in proper architectural logic and common sense, with the guiding principle, "Plan for the future, acknowledging the value of change." We all know that life is not static. We all know the prudence of planning with an eye to the future. Yet few college building programs are conceived with this principle in mind. To the best of our ability and within the limit of our vision and imagination, we must consider the use that will be given the buildings by succeeding generations. The overworked and much repeated saying of Daniel Burnham, "Make no little plans," still holds good today, when we are constantly confronted with short-sighted building committees who can think in only limited terms. We all recognize the value of change in progress. Yet change should not be made merely for the sake of change; it should be guided by fundamentals so as not to add to the confusion of our times.

The next guiding principle is one which has caused many headaches to college authorities, "Plan with an eye to the proper use of materials and to the maintenance factor." Many college buildings have been a constant drain on college funds because of improper use of materials which necessitate con-

stant and costly maintenance. We are living in an industrial age or industrial revolution, as you choose, which offers many excellent choices of durable materials. Yet many architects and building committees refuse to take advantage of what is available. We can master and assimilate the technical improvements afforded by this industrial age if we will stop re-creating the past to obtain better construction.

Too much can never be said for the guiding principle, "Plan according to an existing master-plan and consider the relation of the school to the community." With examples of bad urban and rural planning constantly before them, college authorities should acquaint themselves thoroughly with the master-plans of their area and conscientiously work within these requirements for the good of all and for future generations. Little is gained in urban or rural planning by rearranging discomfort after the damage has been done, although it could have been avoided. Besides, from a strictly cold-blooded business viewpoint, such architectural planning is very costly.

When we say, "Plan in a contemporary manner," we are getting onto ground that appears more like an intellectual battlefield than a field of common sense, logic, and order. There are many explanations of this wide divergence of opinion, but it is not the purpose of this discussion to review them. However,

my own viewpoint is, in substance, that many architects and school authorities, believing they are limited by public taste, want design the success of which can be, or already has been, measured. This effort to please the public, based on predictable acceptance, is a weakness which is appalling to the progressive spirit. There is a tremendous subconscious resistance to change on the part of the public, and many of us architects realize that we are not going to change public taste overnight despite our arguments that all classic and medieval styles were daring and progressive in their day. Today, however, we are aided in our doctrine by the present high cost of construction. If nothing else, cost will force simplification and will encourage directness of approach to a problem through the elimination of nonessentials but without loss of character or barrenness of appearance.

When we consider the principle, "Plan with the assistance of qualified professional architects and engineers," we come to a point close to my heart. As an architect knowing the value of all the principles discussed above, it is hard for me, as it is for my colleagues, to understand how and why college authorities and building committees will often embark on ambitious building programs without the assistance of qualified professionals. In many

cases, stock plans are used regardless of their adaptability to need requirements, human needs, flexibility, and other principles governing good planning. It is only common sense and good sound business to obtain the advice and assistance of persons with experience and training to render professional services in a construction program. As no two problems are alike from the standpoints of need requirements, regional characteristics, available materials, topography of site, and, most important, human need, I highly recommend that any college contemplating construction, large or small, ambitious or of little significance, always engage competent professionals for advice and services. Their recommendations will, almost certainly, fall into materially the same set of guiding principles that I have set forth. Although not expressed in the same words, perhaps, the underlying fundamentals of good sound planning will still be recognized.

Only with knowledge and understanding can we hope to improve the quality of future college buildings. We must recognize the necessity for sound, straightforward thinking in the formulation of building programs and for the observance of guiding principles that contemplate making a thorough analysis of need, planning for the human requirements of today, and reaching for a vision of tomorrow.

Junior-College Library Problems

B. LAMAR JOHNSON

What problems relating to the junior-college library are in greatest need of investigation?

What are the possibilities of preparing and publishing a list of books recommended for junior-college libraries?

These are the questions which were asked of a special Library Committee that was established jointly by two research committees (the Committee on Administrative Problems and the Committee on Curriculum and Adult Education) of the American Association of Junior Colleges at the 1947 winter meeting. This special committee was made up of three members: Rodney Cline, representing the Committee on Administrative Problems; B. Lamar Johnson, (serving as chairman) representing the Committee on Curriculum and Adult Education; and Mary H. Clay, representing the Junior Col-

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lege Section of the Association of College and Reference Libraries.¹

The committee decided to ask the help of junior-college librarians and administrators in identifying library problems which need to be investigated. Accordingly, an inquiry form listing nineteen library problems was sent to the librarians of all junior colleges belonging to the American Association of Junior Colleges, with a request that they give their judgment regarding the importance of these problems for early investigation. In order that the judgment of administrators might be compared with those of librarians, a similar inquiry was sent to the administrator (as well as to the librarian) in junior colleges with enrolments of more than 300.

Usable replies were received from 39 administrators and from 140 junior-college librarians, 67 of whom are in junior colleges with enrolments of 300 or fewer (hereafter these will be referred to as "small junior colleges") and 73 of whom

¹ With the election of Miss C. Louise Roewekamp to the chairmanship of the Junior College Section of the Association of College and Reference Libraries, she has replaced Miss Clay on the committee.

are in institutions having enrollments of more than 300 ("large junior colleges").

In order to determine the junior-college library problems which, in the judgment of the respondents, are in greatest need of study, a weighting plan has been used. A value of 3 has been assigned to each response rating a problem as urgently in need of early investigation, 2 to each reply designating a problem as important but less urgent, 1 to each answer indicating a problem as of less importance, and 0 to each problem not checked as important. On the basis of the replies and with the use of this weighting, the problems have been ranked in Table 1 in order of the importance assigned them by each responding group.

Perhaps the most single important finding of the study is identification of those library problems ranked most important for investigation. It will be observed that all responding groups (librarians in small and large junior colleges and librarians and administrators in thirty-nine junior colleges from each of which two responses were received) agree in identifying the following four problems as most in need of study: "Expenditures for books and periodicals," "Teaching students to use library," "Activities of teachers to encourage effective use," and "Library plant and facilities."

It is interesting to observe that "Aids to book selection (lists, etc.*)" is ranked eighth in importance by librarians and tenth by administrators. At first thought, this relatively low rating might seem to indicate that the preparation of a book list, the possibility of which the special committee was asked to explore, should await the study of seven or eight more important problems. More mature consideration suggests, however, that the greatest value of aids to book selection would be to new junior colleges, many of which are only now being organized. Examination of the returns from the inquiry reveals that most of the returns were received from established junior colleges which would be less in need of aids to book selection. Accordingly, for the benefit of new (many of which are not yet organized) and recently organized junior colleges, the special Library Committee will continue to explore the possibility of having aids to book selection prepared.

The results of the inquiry may also be studied from the viewpoint of differences in importance assigned to problems by various groups responding to the inquiry.

Librarians in small junior colleges attach greater significance than do librarians in large institutions to "Selecting and training student assistants" (small, rank 5; large, rank 13) and to "Encourag-

ing pleasure reading" (small, rank 10; large, rank 16). Undoubtedly, the librarians of small junior colleges are concerned about the student-assistant problem because of the need of making extensive use of students on their staffs.

Librarians in large junior colleges attach greater importance than do librarians in small colleges to the following problems: "Activities of librarians to encourage effective

use" (large, rank 5; small, rank 11); "Criteria for determining number on library staff" (large, rank 9; small, rank 13.5); and "In-service training of librarians" (large, rank 12; small, rank 15.5).

In thirty-nine junior colleges where inquiries were returned by both librarians and administrators, these officials agree on the four problems selected as most important and on the three ranked as

TABLE 1.—JUNIOR-COLLEGE LIBRARY PROBLEMS RANKED ON BASIS OF IMPORTANCE FOR EARLY INVESTIGATION

Problem	Rank Assigned by Librarians			Rank Assigned in Large Colleges*	
	Small Colleges (67)†	Large Colleges (73)	Total (140)	Librarians	Administrators
Expenditures for books and periodicals	1	2	1	2	3.5
Teaching students to use libraries .	2	1	2	4	2
Activities of teachers to encourage effective use	3.5	3	3	1	1
Library plant and facilities	3.5	4	4	3	3.5
Salaries of librarians	6	6	5	5	5.5
Activities of administrators to encourage effective use	7	8	6	6	5.5
Activities of librarians to encourage effective use	11	5	7	7.5	7
Aids to book selection (lists, etc.)	8	7	8	7.5	10
Criteria for preparation of librarians	9	10	9	10	15.5
Selecting and training student assistants	5	13	10	11	11
Criteria for determining number on library staff	13.5	9	11	16	12
Encouraging pleasure reading	10	16	12	14	9
Responsibility of library for supplying audio-visual materials	13.5	11	13	9	14
Expenditures for recordings, motion pictures, and other audio-visual materials	12	14.5	14	12	8
In-service training of librarians	15.5	12	15	15	13
Relationships to other libraries (local public, high-school)	15.5	14.5	16	13	15.5
Loss of books and overdue books ..	17	18	17	17	18
Schedule (hours of opening)	19	17	18	18	19
Responsibility to alumni and public	18	19	19	19	17

* Responses from thirty-nine junior colleges in which both librarians and administrators replied to the inquiry.

† Numbers in parentheses indicate the number who replied in the group specified.

least in need of investigation. On several items, however, the two groups differ.

The librarians rate as of greater importance than do administrators: "Criteria for preparation of librarians" (librarians, rank 10; administrators, rank 15.5) and "Responsibility of library for supplying audio-visual materials" (librarians, rank 9; administrators, rank 14).

On the other hand, administrators give greater weight to the importance of "Criteria for determining number on library staff" (administrators, rank 12; librarians, rank 16); "Encouraging pleasure reading" (administrators, rank 9; librarians, rank 14); and "Expenditures for recordings, motion pictures, and other audio-visual materials" (administrators, rank 8; librarians, rank 12).

It is interesting to observe that, whereas librarians are more concerned about the problems of the library's responsibility for audio-visual materials, administrators are more concerned about expenditures for such materials. This difference may suggest that administrators recognize the library's responsibility for the administration of audio-visual materials but feel a need for determining the amount to be spent.

As one examines the items on which different groups disagree by as much as three or more places in

ranking, it is interesting to observe that all items except two ("Selecting and training student assistants," ranked fifth by librarians of small junior colleges, and "Activities of librarians to encourage the effective use of library materials," ranked fifth by librarians of large junior colleges) are ranked eighth or lower by all groups. In other words, items on which there is disagreement tend to be those ranked low in importance.

Up to this point, interpretation of responses has been based entirely on the rank order assigned problems. It would, of course, be possible for a problem to be ranked high as compared with other items and be rated relatively low in terms of urgency of study. Accordingly, the question might be raised: Just how urgent, in the opinion of these librarians and administrators, is the need for investigation of these problems? Sixty per cent of the respondents believe that the four problems ranked highest in importance are "urgently in need of early investigation."

On the basis of these data, it seems clear that the research committees of the American Association of Junior Colleges can proceed with the investigation of library problems, with the assurance that librarians and administrators believe such studies are urgently needed.

Administrative and Supervisory Practices for Improving Instruction. I

JAMES W. REYNOLDS

JUNIOR colleges traditionally have maintained that they provide a superior type of instruction in their classrooms. Almost a quarter-century ago, Koos reported evidence to support this claim.¹ In the face of this situation, it was only natural that sooner or later the Committees on Research and Service of the American Association of Junior Colleges should undertake a study of instructional practices in junior colleges.

Joint Study of Administrative Practices To Improve Instruction

Two of these committees, the Committee on Administrative Problems and the Committee on Curriculum and Adult Education, became interested in the topic, "Administrative and Supervisory Practices for Improving Instruc-

tion." Since the topic had implications for each of the committees, agreement was reached to undertake a joint study. This idea led to the preparation of a questionnaire by the Director of Research and the circulation of this questionnaire among the junior colleges.

The questionnaire was composed of fourteen major sections. The last section, however, elicited so few responses that it may be ignored. The thirteen sections which produced significant responses include the following: (1) observation and conference, (2) instructor ratings, (3) intervisitation, (4) demonstration teaching, (5) general faculty meetings, (6) co-operative staff projects, (7) organization for curriculum or other instructional improvement, (8) classroom experimentation and research, (9) aids and instructional devices, (10) student personnel practices for improving instruction, (11) staff orientation, (12) administrative

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¹ Leonard V. Koos, *The Junior College*, pp. 214-32. Research Publication of the University of Minnesota, Education Series, No. 5. Minneapolis, Minnesota: University of Minnesota, 1924.

services to instructional staff, and (13) encouragement of advanced study.

The Committees on Administrative Problems, Teacher Preparation, and Curriculum and Adult Education met jointly during the summer sessions of 1947, and each agreed to accept responsibility for processing and reporting the data obtained in certain of the thirteen sections of the questionnaire. Through this arrangement the Committee on Teacher Preparation took Sections 2, 3, 4, and 13; the Committee on Administrative Problems took Sections 1, 5, 10, 11, and 12; while the Committee on Curriculum and Adult Education took Sections 6, 7, 8, and 9.

Data included in the returns from the questionnaires were summarized by the office of the Director of Research into forty-two tables. The magnitude of these tabulations makes it impracticable to present them in full in the *Junior College Journal*. For this reason, each of the Committees on Research and Service involved in the study will further summarize the sections for which they accepted responsibility. This article is concerned with the sections assigned to the Committee on Curriculum and Adult Education.

Co-operative Staff Projects

The first of the sections assigned to the Committee on Curriculum

and Adult Education deals with the incidence of co-operative staff projects for improving instruction. Information received indicates the number of schools reporting activity of this type, as well as the form of organization employed. Improvement of instruction was broken down into several categories. The results of this part of the study are presented in Table 1.

The basis for determining the percentages in the part of the table headed "Percentage Reporting Project" differs from the basis employed in the part headed "Organization for Study of Project." In the former the percentage reported represents the proportion of the 102 private and 126 public junior colleges which indicated activity in each of the categories. The percentage reported in the latter part represents the proportion each item in each column headed "Number" is of the total of the two corresponding items in the two columns. Hence the total of the percentage columns in the latter part of the table is always 100.

An examination of Table 1 reveals that, with the exception of the category "Curriculum construction and revision," none of the other items engages the attention of as many as half of the junior colleges. This situation may be the result, in part, of the respondents' interpreting this category as inclusive of part or all of the others. The

marked drop of frequency of mention to the next category, "Study of student body interests and needs," may also be accounted for by the difference in degrees of specificity of the two types. Many junior colleges will engage in informal attempts to construct or revise curriculum programs, but the at-

A comparison of the columns showing the percentages of public and private junior colleges reporting projects indicates some interesting possibilities. Immediately outstanding is the contrast in the row entitled "Community survey." Here the public junior colleges report almost twice as much activity

TABLE 1.—CO-OPERATIVE STAFF PROJECTS FOR IMPROVING INSTRUCTION IN
102 PRIVATE AND 126 PUBLIC JUNIOR COLLEGES

Project	Percentage Reporting Project		Organization for Study of Project			
	Public Colleges	Private Colleges	Individual Instructor or Department		Entire Faculty or Cross-Departmental Basis	
			Number	Per Cent	Number	Per Cent
Curriculum construction and revision	80.1	77.5	97	45.1	118	54.9
Study of student body interests and needs	49.2	42.2	26	25.2	77	74.8
Comprehensive testing plan	39.7	46.1	49	54.4	41	45.6
Analytical study of instructional materials	33.3	40.2	63	70.8	26	29.2
Testing program in subject area or trait	30.9	27.5	54	77.1	16	22.9
Community survey	27.8	14.7	39	72.2	15	27.8
Comprehensive survey of institution	19.0	27.5	6	12.0	44	88.0
Others	7.9	8.8	.....	.....	.....	.....
None	3.2	2.9	.....	.....	.....	.....
Not answering question	8.7	20.6	.....	.....	.....	.....

tempt is so informal as to prevent classification under a more specific heading.

"Study of student body interests and needs," "Comprehensive testing plan," and "Analytical study of instructional materials" are grouped in the percentage brackets between 30.0 and 50.0, while the next three categories are grouped between 20.0 and 30.0 per cent.

as the private. This condition is consistent with the hypothesis that the public junior college is more a part of the community in which it is located, while the private institution is serving largely a regional clientele. This hypothesis has definite implications for such programs as those involved in adult education, integration of high-school and junior-college curricu-

lums, and general service to the local community.

In so far as the tabulations can be trusted to present a true picture, the private junior colleges are doing more in the categories of "Comprehensive testing plan," "Analytical study of instructional materials," and "Comprehensive survey of institution." The public junior colleges lead in the other categories. Of interest is the large percentage of private institutions which did not answer this question.

The classifications in the four right-hand columns of Table 1 roughly subdivide the organization for study of projects into (1) a group which approaches the individual type of activity and (2) a group which emphasizes the activity of the entire staff. An examination of the tabulations indicates that certain of the categories are characteristically attacked by one or a few individuals, while others are apparently more suited for attack by a larger number.

"Analytical study of instructional materials," "Testing program in subject area or trait," and "Community survey" illustrate the types of activity carried on in junior colleges by single individuals or by departments. On the other hand, two or more departments or the entire faculty engage in such projects as those involved in a study of the needs and interests of the student body or in a comprehensive

survey of the institution. The tabulations indicate that in the remaining two categories little preference is revealed in the report of actual practices.

Organization for Instructional Improvement

The schedules elicited information about three phases of the organizational plans employed by the junior colleges: (1) the assignment of certain functions to specific officers or staff members, the time allowance, if any, for this work, and the title of the officer or staff member; (2) time allowance made for the work of curriculum committee members; and (3) the use of outside specialists for curriculum improvement during the last two years.

Current practice in regard to the assignment to specific staff members of responsibility for certain functions of curriculum and instruction improvement is summarized in Table 2. Junior colleges are classified by size (those with enrollments of 300 or fewer being classified as small) and by type of control (public or private). It will be observed from the table that approximately two-thirds of the 228 junior colleges provided information about this topic.

Consideration of the entries for "All colleges" under the heading "Total" reveals that in only one category, "Directing curriculum

improvement," does the percentage of junior colleges assigning a function to specific staff members approach one-half. A little over a third of the schools make one person responsible for directing examinations and evaluation, and about three-tenths assign the study of pre-professional requirements to a specific staff member. In view of the fact that the registrar is usually

held responsible for this function, this percentage seems remarkably small. Surveying occupations in the community is the task of a special official in fewer than a fifth of the colleges reporting.

Large junior colleges more consistently than small colleges follow the practice of delegating responsibility for definite functions to specific staff members. The possible

TABLE 2.—PERCENTAGE OF JUNIOR COLLEGES ASSIGNING SPECIFIC TASKS TO FUNCTIONARIES FOR PURPOSE OF CURRICULUM AND INSTRUCTION IMPROVEMENT

<i>Function</i>	<i>Public Colleges*</i>	<i>Private Colleges†</i>	<i>Total</i>
Directing curriculum improvement:			
Small colleges	43.8	48.5	46.6
Large colleges	43.6	61.8	49.1
All colleges	43.7	52.9	47.8
Directing examinations and evaluation:			
Small colleges	27.1	32.4	30.2
Large colleges	35.9	47.1	39.3
All colleges	32.5	37.3	34.6
Studying pre-professional requirements:			
Small colleges	31.3	23.5	26.7
Large colleges	34.6	32.4	33.9
All colleges	33.3	26.5	30.3
Appraising library materials and textbooks:			
Small colleges	25.0	26.5	25.9
Large colleges	29.5	35.3	31.3
All colleges	27.8	29.4	28.5
Co-ordinating general education:			
Small colleges	20.8	22.1	21.6
Large colleges	21.8	32.4	25.0
All colleges	21.4	25.5	23.2
Surveying occupations in community:			
Small colleges	20.8	7.5	12.9
Large colleges	23.1	17.6	21.4
All colleges	22.2	10.8	17.1
None:			
Small colleges	4.2	2.9	3.4
Large colleges	6.4	.....	4.5
All colleges	5.6	2.0	3.9
No answer to question:			
Small colleges	37.5	36.8	37.1
Large colleges	24.4	32.4	26.8
All colleges	29.4	35.3	32.0

* The public institutions include: small colleges, 48; large colleges, 78; total, 126.

† The private institutions include: small colleges, 68; large colleges, 34; total, 102.

explanation for this situation probably lies in the greater availability of personnel. Nearly twice as many large as small junior colleges observe this procedure in the surveying of occupations in the community; approximately a third more large junior colleges have special personnel for directing examinations and evaluation; and approximately a fourth more large schools have a specific staff member for studying pre-professional requirements.

More private junior colleges than public institutions, in the aggregate, report cases of holding specific staff members responsible for the functions of directing curriculum improvement, directing examinations and evaluation, appraising library materials and textbooks, and coordinating general education. Only in the case of the first of these functions does the advantage amount to as much as 25 per cent, and even in this category this figure is not quite reached. The chief difference in these two types of junior colleges is noted in the category "Surveying occupations in the community." In this instance, the public junior colleges exceed the private by 100 per cent. Comment on this situation has been made previously.

A study of other questionnaire returns, not tabulated in this article, indicates that, in cases in which responsibility for a special function is specifically assigned, the time al-

lowed for the work varies in the several categories from a high of one-third of full time for those directing examinations and evaluation to one-fifth of full time for those engaged in surveying occupations in the community, studying pre-professional requirements, and appraising library materials and textbooks. Large junior colleges generally allow more time for the special functions. No comparison was made between public and private institutions.

A study of the titles used most frequently to indicate the staff member to whom the several functions are assigned reveals no common practice among the junior colleges. In no instance is there agreement among more than three-tenths of the junior colleges (28 per cent of the small junior colleges used the title of "dean" as the official who directed the program of curriculum improvement). This condition suggests absence of a trend to associate certain curriculum and instructional improvement functions with definite officials.

The second of the phases of the organization for curriculum and instruction improvement concerns the extent to which curriculum committee members are allowed time for their work. Since the setting-up of curriculum committees appears to be a little-used practice, the responses are not tabulated in this article. Only a sixth of the jun-

ior colleges answering the questionnaire gave a response on this topic, and approximately a third of these indicated that no formal or definite procedure is followed. The three procedures for allowing time which were mentioned most frequently were: released time from teaching (five schools), work done after

whole, more private junior colleges than public schools resort to the use of outside specialists and that small schools make more frequent use of this practice than do large schools. More than a fifth of the small private junior colleges reporting indicated the practice of calling in outside specialists.

TABLE 3.—DATA SUPPLIED BY JUNIOR COLLEGES ON USE OF OUTSIDE SPECIALISTS DURING THE PAST TWO YEARS

Classification of College	Number Not Answering Question	Colleges Citing Use of Specialists		Colleges Not Citing Use of Specialists	
		Number	Per Cent*	Number	Per Cent*
Public colleges:					
Small	38	7	14.6	3	6.3
Large	63	10	12.8	5	6.4
Total	101	17	13.5	8	6.3
Private colleges:					
Small	54	14	20.6	.....	.....
Large	25	5	14.7	4	11.8
Total	79	19	18.6	4	3.9
Public and private:					
Small	92	21	18.1	3	2.6
Large	88	15	13.4	9	8.0
Total	180	36	15.8	12	5.3

* The percentages are based on the total number of colleges in each category, not on the number answering the question.

school hours (five schools), and load arranged through individual agreement (four schools).

The last phase of the organization plan concerns the use of outside specialists. Responses in this category are tabulated in Table 3. Of immediate note is the fact that almost four-fifths of the responding institutions did not answer the question pertaining to this item. The tabulations show that, as a

Additional requests for information concerning the nature of the outside specialists elicited little information. The type most frequently used was senior-college and university personnel.

Classroom Experimentation and Research

The schedules sought to determine the extent and the nature of the experimentation and research

being conducted in the classrooms of junior colleges. One question asked in this section of the questionnaire was: "Is classroom experimentation and research encouraged in your institution?" The wording of this question may possibly have produced more affirmative answers than actual cases would justify, since the average respondent would probably hesitate to

and about one-fifth did not supply information. It cannot be concluded that the one-fifth reported as not encouraging experimentation and research actually discourage this practice, but the writer is aware from a previous study² that many junior-college administrators regard such activity as outside the province of the responsibilities of their staffs.

TABLE 4.—JUNIOR COLLEGES ENCOURAGING CLASSROOM EXPERIMENTATION AND RESEARCH

Classification of College	Number Not Answering Question	Colleges Encouraging Classroom Research		Colleges Not Encouraging Classroom Research	
		Number	Per Cent*	Number	Per Cent*
Public colleges:					
Small	6	31	64.6	11	22.9
Large	12	50	64.1	16	20.5
Total	18	81	64.3	27	21.4
Private colleges:					
Small	23	30	44.1	15	22.1
Large	4	22	64.7	8	23.5
Total	27	52	51.0	23	22.5
Public and private:					
Small	29	61	52.6	26	22.4
Large	16	72	64.3	24	21.4
Total	45	133	58.3	50	21.9

* The percentages are based on the total number of colleges in each category, not on the number answering the question.

brand his institution as one in which such activity was discouraged. If this be the case, the data contained in Table 4 do not present a true picture.

The figures presented in the bottom row of Table 4 indicate that approximately three-fifths of the junior colleges encourage classroom experimentation and research, one-fifth do not encourage this practice,

Public junior colleges are seen to encourage this type of activity more than private schools, and in the main the large schools are more active in this practice than are the small schools. However, the differ-

² James W. Reynolds, "The Adequacy of the General Education Program of Local Public Junior Colleges," pp. 187-88. Unpublished Doctor's Dissertation, Department of Education, University of Chicago, 1945.

ence between the small and the large schools stems almost entirely from the difference between these two types of schools in the category of private institutions.

Instructional Devices

One section of the questionnaire made an effort to learn (1) what instructional aids or devices are

TABLE 5.—PERCENTAGE OF JUNIOR COLLEGES REPORTING USE OF AUDIO-VISUAL AND OTHER INSTRUCTIONAL AIDS

<i>Aid or Device</i>	<i>Public Colleges*</i>	<i>Private Colleges†</i>	<i>Total</i>
Sound motion pictures:			
Small colleges	72.9	89.7	82.8
Large colleges	98.7	88.2	95.5
All colleges	88.9	89.2	89.0
Silent motion pictures:			
Small colleges	50.0	42.6	45.7
Large colleges	71.8	52.9	66.1
All colleges	63.5	46.1	55.7
Silent filmstrips:			
Small colleges	52.1	45.6	48.3
Large colleges	67.9	47.1	61.6
All colleges	61.9	46.1	54.8
Foreign-language recordings:			
Small colleges	45.8	45.6	45.7
Large colleges	67.9	52.9	63.4
All colleges	59.5	48.0	54.4
Dictaphone:			
Small colleges	33.3	29.4	31.0
Large colleges	55.1	55.9	55.4
All colleges	46.8	38.2	43.0
Typewriting and shorthand recordings:			
Small colleges	35.4	22.1	27.6
Large colleges	48.7	41.2	46.4
All colleges	43.5	28.4	36.8
Sound filmstrips:			
Small colleges	12.5	10.3	11.2
Large colleges	32.1	23.5	29.5
All colleges	24.6	14.7	20.2
Others:			
Small colleges	47.9	27.9	36.2
Large colleges	39.7	67.6	48.2
All colleges	42.9	41.2	42.1
No answer:			
Small colleges	2.2	4.4	3.4
Large colleges .....	.....	2.9	0.9
All colleges	0.8	3.9	2.2

* The public institutions include: small colleges, 48; large colleges, 78; total, 126.

† The private institutions include: small colleges, 68; large colleges, 34; total, 102.

used and (2) which of these are used extensively or with unusual success. Information concerning the status of aids used is presented in Table 5. Percentage figures are based on the proportion of the junior colleges in each of the categories which reported use of the several aids listed. The first seven items listed in the column "Aid or Device" were included in the schedule sent to the junior colleges.

The section of Table 5 which reports the tabulations for all the junior colleges shows that the use of sound motion pictures, reported by almost nine-tenths of the schools, is the most popular type of instructional aid. Other aids mentioned by half or more of the institutions are silent motion pictures, silent filmstrips, and foreign-language recordings. Sound filmstrips are apparently used less than any other type reported.

A comparison of public and private institutions shows the latter to exceed the former in the use of sound motion pictures only, and in

this category the difference is slight. It is difficult to conjecture an explanation for this situation especially in light of the theory that private colleges are traditionally freer to adopt innovations than are public schools. Some clue to an explanation may lie in the possibility that the category "Others" includes more radical innovations than the preceding seven categories; for in this category the large private junior colleges exceed the large public junior colleges by approximately two-thirds.

Large junior colleges consistently report greater frequency of use of instructional aids and devices than do the smaller schools. In no category do the small junior colleges exceed the large schools. The difference in favor of the large institutions is most pronounced in the use of dictaphone, silent motion pictures, typewriting and shorthand recordings, and sound filmstrips. The probable explanation for this condition is the greater resources of the larger schools.

Problems Confronting the Junior Colleges

ADOLPH UNRUH

AT THE annual meeting of the American Association of Junior Colleges held in St. Louis in February, 1947, numerous reports stressed the imperative need for research in education at the junior-college level. The Association has five standing committees which are attempting, with the assistance of Leonard V. Koos, director of research, to co-ordinate the research in the various areas.

Problems have a way of arising, clamoring for attention, and then subsiding. What may be a problem in administration in one school may not be important in another. Similarly, in one school there may be much concern about the curriculum in one or more of its aspects, while in another school these problems have been satisfactorily met. The research program of the Association and the investigations made by others will identify the problems that are urgent today.

The writer undertook to find out what some of these problems are.

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Ideas were collected from the state departments of education, from magazines, and from deans of the public junior colleges of Kansas.

Opinions in State Departments

First, a questionnaire was addressed to the forty-eight state departments of education. The question was asked: "What do you consider the most pressing problems facing the junior colleges of your state?"

Thirty-two of the forty-eight state departments answered the question. Since there was no check list, the responses were original with each respondent. Undoubtedly a better response would have been elicited with a prepared check list, but a listing would have defeated the purpose of the study, which was to compile a list of problems, not to suggest them. After duplications had been eliminated and similarities combined, there remained eighteen problems. In Table 1 these problems are listed in order of frequency of mention.

According to officials of the state departments, the problem of financial support looms the largest.

Sixty-three per cent of the departments answering this question mentioned this problem. Next in importance is an adequate staff. This item has reference to the shortage of teachers and not to competently trained staff, which ranks sixth. Classroom facilities and permissive legislation are third in rank. Each of the other problems was mentioned by only one state department.

problems. When duplications had been eliminated and closely allied or related problems combined, there remained a list of thirty-three problems, critical or otherwise. These problems are listed in Table 2.

Of the first five items, three are concerned with curriculum. Vocational and technical curriculums, general curriculums (general education), and curriculum revision rate first, second, and fourth, re-

TABLE 1.—PROBLEMS FACING JUNIOR COLLEGES AS LISTED BY THIRTY-TWO STATE DEPARTMENTS OF EDUCATION

<i>Problem</i>	<i>Rank</i>	<i>Frequency of Mention</i>	<i>Problem</i>	<i>Rank</i>	<i>Frequency of Mention</i>
Financial support, including state aid	1	20	Teachers' salaries	13	1
Adequate staff	2	5	Membership in accrediting association	13	1
Classroom facilities	3.5	4	Equality of educational opportunities	13	1
Permissive legislation ...	3.5	4	Functional terminal courses	13	1
Housing	6	2	Vocational education ...	13	1
Expansion of program ...	6	2	Place and function of junior colleges	13	1
Qualified teachers	6	2	Credit for physical education and health	13	1
Adequate curriculum	13	1			
State supervision	13	1			
State program	13	1			
Transfer of students	13	1			

Problems in the Literature

Next, the writer turned to Volume XVII of the *Junior College Journal* and to the March, 1947, number of the *California Journal of Secondary Education* (the latter was given entirely to consideration of "Critical Problems in the Junior College"). Ninety-three articles and digests were scanned. This process produced a sizable catalogue of

spectively. Guidance ranks third in frequency. Methods of instruction and organization, administration, budgeting tie for fifth place. Twenty-seven other problems have frequencies of from one to seven.

It should be pointed out that this list could be further reduced. Placing under curriculum all items that are related to this topic would reduce three items to one, but some

of the distinctions between technical, vocational, general, and terminal education would be lost. Again, guidance and placement might have been combined, but the combined item would not have carried the emphasis that the present division

colleges of Kansas would undoubtedly add some items to this list, but the questionnaire was restricted to public institutions.

The deans listed thirteen problems, which are presented in Table 3. Financial support and guidance,

TABLE 2.—JUNIOR-COLLEGE PROBLEMS MENTIONED IN CURRENT LITERATURE

<i>Problem</i>	<i>Rank</i>	<i>Frequency of Mention</i>	<i>Problem</i>	<i>Rank</i>	<i>Frequency of Mention</i>
Vocational and technical curriculums	1	15	Junior-college surveys ...	15	5
General curriculums	1	13	Terminal education	15	5
Guidance	3	11	Adequate trained faculty	18.5	4
Curriculum revision	4	10	Congestion	18.5	4
Methods of instruction ..	5.5	9	Community service	21	3
Organization, administration, budgeting	5.5	9	Teacher recruitment	21	3
Veterans' education and contracts	7.5	7	Universal military training	21	3
Expansion of college program	7.5	7	Classroom facilities	23.5	2
State policy, control, plans	10.5	6	Housing for students	23.5	2
Articulation of high school with junior college	10.5	6	Social clubs	29	1
Public relations	10.5	6	Teacher load	29	1
Objectives and philosophy of junior college	10.5	6	Transfers	29	1
Instructional standards ..	15	5	Student mortality	29	1
Adult education	15	5	Placement	29	1
Finance	15	5	Personnel services	29	1
			Equalization of opportunity	29	1
			Tuition	29	1
			Professional conditions of teachers	29	1

permits. For these reasons the list was stabilized at the present number.

Opinions of Kansas Deans

The final list of problems was obtained from the deans of the public junior colleges in Kansas. Necessarily this list is smaller, but it is of particular importance to a geographical region. The private junior

including vocational and educational guidance, led the rest. The problem of securing an adequate staff and concern for an appropriate curriculum are of second importance. Nine other items were mentioned, including shortage of instructional space, equipment, and facilities; a competent staff; terminal curriculums; student recruitment; co-ordination of the veterans'

program; and the general services of the institution.

*Degree of Overlapping of
the Lists*

One would expect to find a high degree of similarity in these lists, but actually there is a great deal of difference. Perhaps that is proper. The lag between theory and general practice is well known and

ment, every author of an article or a book, and every dean had views diverging from those of every other on what constituted the important problems facing the junior college. If progress is to be made, the three areas of service represented in this study must be able to co-operate in a common attack on certain issues and to direct and converge their forces on definite objectives.

TABLE 3.—PROBLEMS FACING JUNIOR COLLEGES AS LISTED BY KANSAS
DEANS OF PUBLIC JUNIOR COLLEGES

<i>Problem</i>	<i>Rank</i>	<i>Fre- quency of Men- tion</i>	<i>Problem</i>	<i>Rank</i>	<i>Fre- quency of Men- tion</i>
Financial support	1.5	3	Terminal curriculums ...	9	1
Guidance, including voca- tional and educational .	1.5	3	Housing for students	9	1
Adequate staff	3.5	2	Equipment	9	1
Curriculum	3.5	2	General services (cafe- teria, etc.)	9	1
Competent staff	9	1	Co-ordinating veterans' program	9	1
Classroom space	9	1	Student recruitment	9	1
Adequate buildings	9	1			

would account for some of the divergence between the problems mentioned in the literature and the problems identified by the junior-college deans. Naturally, too, the problems confronting the state-department official may be entirely different from those confronting the deans.

It is also natural that there should be overlapping in the three lists. After all, the problems are related to a particular level of education, the junior college. It would be a sad state of affairs if every official representing a state depart-

*State Directors of Junior
Colleges*

One other item of interest came out of the questionnaire to the state departments, namely, the number of officials in the departments who were designated as junior-college officials. Information supplied on the blank calling for the title of the respondent revealed that only Iowa and Washington support an official whose exclusive domain is the junior college. These two officials held the titles, respectively, "director of public junior colleges" and "direc-

tor of junior colleges." Minnesota has a "director of high schools and junior colleges," and Mississippi has a "supervisor of agricultural high schools and junior colleges." No other state presented a title that is directly and exclusively related to the junior-college level.

The dates of organization of these four junior-college departments were given as follows: Mississippi, 1924 (approximate); Minnesota, 1925; Iowa, 1939; and Washington, 1942. These dates are comparatively recent. Two junior-college departments were organized during the last twenty-five years, and two in the past decade. It is yet too early to read from these facts a trend, but wishful thinking would infer that organization of a separate division for junior colleges within the state department will be realized in the near future.

New York places the junior-college division under the "director of higher education," and this provision was made in 1784—the earliest date claimed for the establishment of a junior-college department.

Concluding Comment

Many opportunities for research are disclosed by the data supplied in this article. Is it unreasonable to

suggest that every junior college in the nation might well engage in the study of one or more problems this year? Not all the studies will be worthy of publication, but all will yield worth-while data. Integrating the results of hundreds of studies will initiate a potent influence for the junior college. Nor is it unreasonable to expect that the cumulative effect will also be advantageous for the profession, for the individual members of the profession, and for education in general.

Research alone is not enough. Unless some use is made of the results, the time and money spent on research might well be saved for some other purpose. However, if all studies and research could be registered with the American Association of Junior Colleges, that organization could then serve as an agency for the dissemination of knowledge and a reference bureau—a service which would be most helpful to the profession and to the public. We must remember that no idea is any better than the people supporting it. Research, experimental studies, honest application, and evidence of results will reveal to the people of this country that the junior-college movement is the biggest advance in American education in a century.

Junior-College Teachers: Subjects Taught and Specialized Preparation

LEONARD V. KOOS

THIS article presents further evidence concerning the junior-college teachers represented in an article published in the October *Junior College Journal*. The previous article reported on the highest degrees held, the years of graduate residence, the influence of the pattern of junior-college organization on these general measures of preparation, and the further preparation in progress among junior-college teachers. In this article report is made from inquiry into the subjects taught by junior-college teachers and the extent of their specialized preparation in these subjects.

In particular and in the order of presentation, this portion of the whole study is concerned with (1) the number of different subjects in which the junior-college teachers gave instruction, (2) the frequency of recurrence of subject combina-

tions of teachers responsible for instruction in more than a single subject, (3) the relationships of subjects taught at college and high-school levels by junior-college teachers, and (4) the extent of the teachers' specialized preparation in subjects taught at the college level. These aspects of the inquiry may be judged in important ways to penetrate more deeply into the problem of the adequacy of junior-college teacher preparation than can a consideration of degrees and graduate residence, however significant the latter may be.

As stated, the teacher population is the same as that represented in the October article. Without repeating the full description of the group, one may say that the information used was supplied in 1941 on a three-page schedule by 1,458 teachers in forty-eight local public junior colleges scattered to nine states in the Midwest, the South, and California. Junior colleges of the three main types of organization, namely, separate two-year units, associations, and four-year units, are included. Although the number and proportions of the

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teachers who made usable replies varies from one phase of the study to another, in the main almost all teachers included responded to all phases of the inquiry.

Number of Subjects Taught

THE OVER-ALL PICTURE.—The number of different subjects which instructors in junior colleges are called on to teach is disclosed by the distributions in Table 1. It may be seen that teachers were classified for this table as "academic," a designation which includes the older instructional fields like English, French, chemistry, etc., and "special," which includes the relative newcomers in the curriculum, for example, music, art, business, and physical education. The term "subject" is applied to the traditional collegiate departments: in this sense, fields like English, French, mathematics, botany, chemistry, history, economics, and psychology are counted as subjects. In the special fields, music, art, agriculture, business, home economics, industrial and technical (engineering) fields, and physical education are counted as subjects.

It is important to repeat what was said in the October article concerning the tabulation of special teachers who were also teaching one or more academic courses: these, numbering 138, were classified as academic teachers. The bearing of this on the distributions

will be indicated to the extent necessary in the following interpretation. Another point to be kept in mind, in considering the distributions, is that they comprehend teaching loads during both semesters of the school year 1940-41. To a slight extent at least, the spread of instructional assignments will be broader for two semesters than for one semester only.

TABLE 1.—NUMERICAL AND PERCENTAGE DISTRIBUTION OF JUNIOR-COLLEGE TEACHERS ACCORDING TO THE NUMBERS OF DIFFERENT SUBJECTS IN THEIR INSTRUCTIONAL ASSIGNMENTS

Number of Subjects	Academic Teachers		Special Teachers	
	Number	Per Cent	Number	Per Cent
1	418	44.8	474	93.9
2	332	35.6	28	5.5
3	125	13.4	3	0.6
4	43	4.6	.....	.....
5	11	1.2	.....	.....
6	4	0.4	.....	.....
Total	933	100.0	505	100.0

It is apparent that fewer than half of all academic teachers in the forty-eight junior colleges were privileged to have assignments in a single subject only. The converse of this statement is that well over half teach two or more different subjects. A considerable proportion teach as many as three different subjects, while a small proportion teach even more.

Few of the special teachers were called on to give instruction in more than a single subject. Restriction of instructional responsibilities to one subject is customarily considered

advantageous to the teacher. In this sense, special teachers in junior colleges have a marked advantage over academic teachers. It should be mentioned, however, that the degree of advantage is, to some extent, minimized by the teachers of special subjects, previously mentioned, who were also teaching academic subjects and were, therefore, classified as academic teachers. All these teachers were tabulated as teaching two or more subjects.

INFLUENCE OF SIZE AND ORGANIZATION.—Hardly a moment's consideration is needed to lead one to the expectation that the numbers of different subjects taught by teachers in small junior colleges run larger than in institutions with greater enrolments. The influence of the organizational pattern—that is, the plan of incorporating the junior college in the school system, through separate two-year units, associations, or four-year units—may be less readily apparent from speculation, but it is nevertheless potent. The influence of both factors, namely, size and organization, may be directly inferred from evidence reported elsewhere by the writer from a study of teaching assignments in small junior colleges (colleges with fewer than two hundred students)¹ in comparison with that presented in Table 1, which includes these same small junior

colleges as well as units of medium and large size. In small junior colleges associated with high schools and in small four-year junior colleges, the proportions of academic teachers responsible for instruction in only one subject were larger than those shown in Table 1 and decidedly larger than those in the separate two-year units. As will be seen at a later point in this article, the advantage is directly attributable to the much greater frequency with which instructors in associations and four-year junior colleges have a part of their teaching load in high-school years.

The degree of advantage of organizational pattern stands out more conspicuously when one takes into account the proportion which small units are of the total number of junior colleges. In 1940-41, when this evidence was assembled, junior colleges with enrolments under two hundred included approximately half the local public junior colleges of the country.² It is certain that the proportion of local public junior colleges of small and moderate size will always be a substantial one.

Subjects and Subject Combinations

SUBJECTS TAUGHT ALONE AND IN COMBINATION.—The presentation of facts concerning the number of different subjects taught by junior-college teachers is followed logically

¹ Leonard V. Koos, *Integrating High School and College: The Six-Four-Four Plan at Work*, p. 141. New York: Harper & Bros., 1946.

² *Ibid.*, p. 13.

by consideration of the individual subjects at the junior-college level appearing alone or in combination with others in the teachers' programs. This consideration is facilitated by the evidence in Table 2, which lists a number of academic subjects prominent in junior-college offerings and reports for each

English, the proportion exceeds three-fourths. The subjects with large proportions teaching only one subject are naturally those with relatively large offerings, those making up large proportions of students' programs through being required subjects, or both. Subjects with strikingly small proportions of

TABLE 2.—NUMBERS AND PERCENTAGES OF JUNIOR-COLLEGE INSTRUCTORS OF CERTAIN SUBJECTS TEACHING THESE SUBJECTS ONLY AND TEACHING THEM IN COMBINATION WITH OTHER SUBJECTS

Subject	Subject Named Only		Combined with Others		Total Teaching the Subject	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
History	27	52.9	24	47.1	51	100.0
Political science	15	23.4	49	76.6	64	100.0
Economics	3	5.2	55	94.8	58	100.0
Sociology	2	9.5	19	90.5	21	100.0
Biology	8	17.4	38	82.6	46	100.0
Chemistry	44	52.4	40	47.6	84	100.0
Physics	13	22.4	45	77.6	58	100.0
Mathematics	69	49.3	71	50.7	140	100.0
English	176	78.9	47	21.1	223	100.0
French	23	44.2	29	55.8	52	100.0
German	4	14.8	23	85.2	27	100.0
Spanish	15	41.7	21	58.3	36	100.0

subject the number and percentage of teachers whose loads were made up of (1) instruction in these subjects only or (2) instruction in these and other subjects. A glance down the first two pairs of columns reaffirms the conclusion, yielded by the evidence in the first table, that most teachers give instruction in more than a single subject field. For three subjects only, namely, history, chemistry, and English, do a majority of the teachers give instruction in a single subject, although for mathematics the proportion rises to almost a half of all. For

teachers giving instruction in them only are political science, economics, sociology, biology, physics, and German.

SUBJECTS IN COMBINATION.—Some readers would doubtless be interested to examine the full array of subject combinations found among the teachers in these forty-eight junior colleges, but the list is so long as to put out of question the feasibility of reproducing it in an article. A simpler and more meaningful manner of displaying the combinations has been devised for presentation here. However, to give

some indication of the impression of confusion in combinations imparted by the full list, it can be reported here that among 414 academic teachers who were teaching two or more subjects and whose subject combinations were accurately identifiable, there were 220

columns in Table 2. The reader will note that these three tables have to do with subject combinations of teachers in the social subjects, including history (Table 3); natural science and mathematics (Table 4); and English and the modern foreign languages (Table 5). Com-

TABLE 3.—SUBJECTS TAUGHT IN COMBINATION BY JUNIOR-COLLEGE TEACHERS OF HISTORY, POLITICAL SCIENCE, ECONOMICS, AND SOCIOLOGY

<i>Subjects in Combination</i>	<i>Number of Teachers of—</i>				
	<i>History</i>	<i>Political Science</i>	<i>Economics</i>	<i>Sociology</i>	<i>All Four Subjects</i>
History .....	.....	36	26	10	72
Political science	17	.....	19	5	41
Economics .....	.....	18	.....	6	24
Sociology	2	3	8	.....	13
General social science .....	.....	6	3	4	13
Psychology	4	4	4	6	18
Philosophy	1	5	.....	1	7
Mathematics	1	3	2	.....	6
Business .....	.....	.....	13	2	15
Geography and geology .....	.....	2	5	.....	7
English .....	.....	3	2	1	6
Other subjects	2	3	9	4	18
Total number of additional subjects	27	83	91	39	240
Number of teachers with combinations	24	49	55	19	147
Average additional subjects	1.1	1.7	1.7	2.1	1.6

different combinations. The degree of non-recurrence of combinations is so great as to make the situation on first impression seem utterly chaotic, and it was imperative to carry the analysis the one step further here reported in order to obtain assurance that the combinations are not largely devoid of rhyme or reason.

The outcomes of the further analysis are presented in Tables 3, 4, and 5, and concern the teachers represented in the second pair of

ments in interpretation will be made on each table.

For the twenty-four teachers of history represented in the first column of Table 3, the programs of seventeen included political science, two included sociology, four included psychology, one included philosophy, one included mathematics, and two included other subjects. It thus appears that the subject most frequently associated in teaching loads with history is political science. Similarly, the subjects

most recurrently combined in their loads for teachers of political science (see second column of the table) are history and economics. For teachers of economics, these subjects are history, political science, and business. For sociology,

for political science, to 90; for economics, to 79; for sociology, to 32. The frequent association of business in combination with economics arises out of a rather common practice of regarding economics as a subject in preparation for com-

TABLE 4.—SUBJECTS TAUGHT IN COMBINATION BY JUNIOR-COLLEGE TEACHERS OF BIOLOGY, CHEMISTRY, PHYSICS, AND MATHEMATICS

<i>Subjects in Combination</i>	<i>Number of Teachers of —</i>			
	<i>Biology</i>	<i>Chemistry</i>	<i>Physics</i>	<i>Mathematics</i>
Biology .....	.....	4	3	1
Botany	14	1	2	.....
Zoölogy	20	1	1	.....
Physiology	8	1	.....	.....
Agriculture	3	.....	.....	.....
Chemistry	7	.....	17	9
Physics	3	18	.....	11
Physical science .....	.....	8	10	1
Astronomy	1	.....	6	6
Geography and geology ...	2	1	3	3
Mathematics	1	9	12	.....
Industrial and technical ..	1	7	10	27
Business .....	.....	.....	1	12
Physical education	6	1	2	5
Other subjects	6	9	6	13
Total number of additional subjects	72	60	73	88
Number of teachers with combinations	38	40	45	71
Average additional subjects	1.9	1.5	1.6	1.2

they are history, political science, economics, and psychology. It is clear that, in the main, the recurring combinations in these subjects are natural, or logical. This observation is reaffirmed by the totals of frequencies of recurrence in the last column, especially if to these frequencies for the subjects are added the numbers of teachers in each of the subjects near the foot of the different columns. Making these additions would bring the frequency in the last column for history to 96;

commercial occupations. The recurrent combination of psychology with the four social subjects is not so readily explicable, although there is an acknowledged relation of psychology to the social subjects.

The subjects most often associated in combination with biology, according to Table 4, are botany, zoölogy, and physiology, all of which are aspects of the broad field of biology. The most frequent associates of chemistry in combination are physics, physical science (usu-

ally as a composite course), mathematics, and industrial or technical (engineering) subjects. For physics, the most recurrent associates are chemistry, general physical science, astronomy, mathematics, and industrial or technical subjects. For mathematics, they are chemistry,

ment in the curriculum that most teachers in it (as indicated in Table 2) teach English only, and it is certain that many of the combination teachers represented in Table 5 are mainly teachers of other subjects with only partial loads in English, when additional sections in this

TABLE 5.—SUBJECTS TAUGHT IN COMBINATION BY JUNIOR-COLLEGE TEACHERS OF ENGLISH, FRENCH, GERMAN, AND SPANISH

<i>Subjects in Combination</i>	<i>Number of Teachers of —</i>				
	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>	<i>All Four Subjects</i>
English .....	.....	.....	7	6	13
French	6	.....	14	12	32
German	2	15	.....	2	19
Spanish	5	12	3	.....	20
Latin	2	2	1	1	6
General humanities	3	1	1	1	6
History	6	.....	.....	2	8
Philosophy	5	.....	.....	.....	5
Psychology	13	4	1	2	20
Political science	3	.....	.....	.....	3
Sociology	5	.....	.....	.....	5
Mathematics	2	.....	.....	.....	2
Physical education	2	1	1	.....	4
Other subjects	4	1	4	3	12
Total number of additional subjects	58	36	32	29	155
Number of teachers with combinations	47	29	23	21	120
Average additional subjects	1.2	1.2	1.4	1.4	1.3

physics, astronomy, industrial and technical subjects, and business.

The subjects associated in combinations with English, as seen in Table 5, run through a wide gamut, including the foreign languages, history, philosophy, psychology, etc. There seems some tendency to associate all or most aspects of the humanities in these combinations. However, it must be remembered that the field of English is so promi-

field are needed. The most frequent associates of French in combination are German and Spanish; for German, they are English and French; for Spanish, they are English and French.

In essaying an overview of the evidence in these three tables, one may say that they indicate the beginnings of a broad field of preparation in the social studies, one in the biological sciences, another in

physical sciences and mathematics, and still another in the humanities with various combinations of the languages. Higher institutions planning programs of preparation for junior-college teachers will do well to take cognizance of these beginnings in recurrent combinations.

RELATIONSHIPS OF SUBJECTS IN DUAL-LEVEL ASSIGNMENTS.—The author's article in the October *Junior College Journal* reported the numbers and the proportions of junior-college instructors teaching at both college and high-school levels. The proportion in two-year separate units was small (6.5 per cent), but the proportion in associations was almost two-thirds, and in four-year units only a shade less than three-fourths, of all. As concerns teaching assignments, it remains to consider the relationships to each other of the subjects taught at the two levels and to appraise the effect of these relationships on the issue of combinations.

Analysis and tabulation of these relationships is presented in Table 6. As many as three-fifths of the dual-level teachers of academic subjects were found to be teaching the same subjects at both high-school and college levels. For instance, the instructor of Spanish in junior-college years was also teaching Spanish in high-school years, and the instructor in mathematics in junior-college years was also teaching mathematics in high-

school years. In addition, 7.1 per cent of these instructors were teaching the same subject at both levels and other subjects at the high-school level in the same general area as the subject taught in junior college. For example, such an instructor might be teaching history at both high-school and junior-college levels and political science (or civics) at the high-school level. Beyond this, 12.6 per cent were teaching in the same areas (but not the same subjects) at high-school and junior-college levels, as when an instructor of political science at the college level was teaching American history at the high-school level. The fourth and fifth categories in the table include small proportions of instructors, parts of whose responsibilities at the high-school level were in the same subjects or areas as those represented by their junior-college subjects and other parts outside these subjects or areas.

Only 10 per cent of all academic instructors teaching at both levels were teaching subjects at the high-school level outside the areas represented by their college-level teaching, as when an instructor in chemistry in college years was found to be teaching English or American history at the high-school level.

As may be seen in the second pair of columns of Table 6, practically all instructors in special subjects (excepting those who were also

teaching academic subjects at the college level and were in consequence classified as academic teachers) who were doing dual-level teaching were found to be teaching the same subjects at both levels.

An indubitable and important effect of dual-level teaching on junior-college instructors' responsibili-

Table 6 teach more than a single subject and practically none teaches in different subject fields at the two levels.

Another important effect of dual-level teaching must be the improved articulation of high-school and college courses. It would be difficult to conceive of better assurance of vertical integration of

TABLE 6.—RELATIONSHIP OF SUBJECTS TAUGHT AT THE HIGH-SCHOOL LEVEL TO SUBJECTS TAUGHT AT THE COLLEGE LEVEL BY JUNIOR-COLLEGE TEACHERS

<i>Relationship</i>	<i>Academic Teachers</i>		<i>Special Teachers</i>	
	<i>Number</i>	<i>Per Cent</i>	<i>Number</i>	<i>Per Cent</i>
1. Same subject	263	60.0	315	98.1
2. Same subject and same area ..	31	7.1	1	.3
3. Same area (but not same subject)	55	12.6	.....	.....
4. Same subject and other area or areas	24	5.5	2	.6
5. Same area and other area or areas	21	4.8	.....	.....
6. Other area or areas	44	10.0	3	1.0
All teachers	438	100.0	321	100.0

ties is to restrict the horizontal range of subjects which they are called on to teach. This advantage is achieved without their being obliged to step outside their subjects or areas even at the high-school level, since only a small minority of dual-level academic teachers were found to have lower-level teaching assignments unrelated to the subjects that they were teaching in the junior college. Analogous facts concerning special teachers give point to this conclusion, since few of those represented in the second pair of columns in

courses than is afforded in situations in which the same teachers give courses in the same subjects at the two levels. Certainly, in these situations the teacher at the college level must have an intimate knowledge of what transpires in courses in the same subject field at the high-school level.

Preparation in the Subjects Taught

MEASURES OF PREPARATION APPLIED.—The remaining chief portion of this article is concerned with the extent of preparation of aca-

demic instructors in the subjects that they were teaching. The schedule filled out by instructors included a section on which they entered the names of the subjects in which they had had majors and minors during their periods of undergraduate and graduate study in higher institutions. Tabulation of the entries showed the numbers and the percentages of instructors in any subject who had had majors at either or both undergraduate and graduate levels, who had had minors at either or both levels, who had any combination of undergraduate or graduate majors and minors, or who were without majors or minors in their teaching fields during their programs of preparation. The combinations of measures subsequently applied are those seeming to yield the maximum of import for appraisal of subject preparation.

TEACHERS OF VARIOUS SUBJECTS COMPARED.—The subjects represented in the comparison of teachers made are listed in alphabetical order in Table 7. These subjects were chosen because they are allotted widely varying prominence in junior-college offerings and prescriptions. The combination measures of preparation at the heads of the pairs of columns may require brief explanation, which can be supplied by interpreting the figures in the table opposite the first subject, chemistry. Of the 122 instruc-

tors of this subject included in the comparison, 68, or 55.7 per cent, are seen to have had "double majors," that is, majors in chemistry at both undergraduate and graduate levels. Thirty-two, or 26.2 per cent, had had undergraduate *or* graduate majors (not both) in chemistry, *or* a combination either of undergraduate major and graduate minor or undergraduate minor and graduate major. Manifestly, the second group on the whole had had somewhat less preparation than the first. Seven, or 5.8 per cent, had had only double or single minors, meaning minors in chemistry at both undergraduate and graduate levels *or* at only one of the two levels. Fifteen, or 12.3 per cent, of these teachers of chemistry, were teaching the subject without having had either majors or minors at undergraduate or graduate levels.

One further comment on the table is desirable before interpreting the comparison. The total number of teachers given at the foot of the last pair of columns, 1,878, is much larger than the total number of junior-college teachers included in the study, which was stated near the opening of the article to be 1,458. The explanation of the excess is in the fact, already reported, that most teachers gave instruction in two or more subjects: a given teacher must be taken into account in such a comparison for each different subject taught.

By glancing down the first pair of columns, one may note that, in addition to the teachers of chemistry, not far from a half of the teachers of English, French, German, history, and Spanish had had double majors in these subjects. For mathematics, the proportion exceeds a third of all teachers. For all other subjects in the list, the proportion ranges from 10.1 per cent for sociology to 27.5 per cent for psychology.

Additional understanding of the situation may be derived from examination of all three of the remaining pairs of columns reporting measures of preparation, but attention here will be restricted to the column "Without majors or minors." In this column, with one exception, the proportions are relatively high for the subjects with low proportions for double majors. The exception is psychology. For all other subjects the proportions are low, and, as is to be expected, the subjects are those with high proportions in the columns reporting double majors. The two pairs of columns for these highest and lowest measures are reciprocally corroborative.

In two rows of figures near the foot of Table 7, the evidence for the two groups of subjects with relatively high and relatively low prominence in junior-college offerings have been drawn together for direct comparison. The contrasting

proportions disclosed, especially for the highest and the lowest measures, are in accord with those reported for the individual subjects.

INFLUENCE OF ORGANIZATION.—

As was done above while considering the number of different subjects taught by junior-college instructors, the results of inquiry concerning the influence of organization in junior colleges of small size on specialized preparation will next be reported. This is done by interpreting the evidence compiled in Table 8. In this table, only instructors in junior colleges with enrolments of fewer than two hundred students are represented. For simplification, the measures of preparation have been reduced to two: the higher one, "Majors in some combination," including the two highest measures used in Table 7, and the lower one, "Minors or less," including the two lowest measures in that table. The subject Groups A and B, designated in the left-hand column, correspond with the two groups near the bottom of Table 7. The three types of organization—separate two-year, association, and four-year—require no further explication here.

The significance of the evidence in this table becomes apparent as soon as one notes the consistent trends of the percentages of teachers with "Majors in some combination" and with "Minors or less." For both groups of subjects, the percentages of teachers with the higher measure

TABLE 7.—NUMBERS AND PERCENTAGES OF TEACHERS IN THE DIFFERENT SUBJECTS AND IN ALL SUBJECTS REPORTING CERTAIN INDICATIONS OF PREPARATION IN THOSE SUBJECTS

Subject	Double Majors		Graduate or Undergraduate Majors or Combination of Majors and Minors		Double or Single Minors Only		Without Majors or Minors		No Answer		Total	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
1. Chemistry	68	55.7	32	26.2	7	5.8	15	12.3	.....	.....	122	100.0
2. Economics	9	10.8	16	19.3	19	22.9	38	45.8	1	1.2	83	100.0
3. English	253	48.8	140	27.0	94	18.2	28	5.4	3	.6	518	100.0
4. French	48	57.8	15	18.1	11	13.3	9	10.8	.....	.....	83	100.0
5. Geography and geology	8	14.8	14	25.9	6	11.1	26	48.2	.....	.....	54	100.0
6. German	17	50.0	7	20.6	8	23.5	2	5.9	.....	.....	34	100.0
7. History	120	46.8	66	25.8	38	14.9	30	11.7	2	.8	256	100.0
8. Mathematics	81	34.9	54	23.3	56	24.1	37	16.0	4	1.7	232	100.0
9. Physics	18	22.0	26	31.7	23	28.0	14	17.1	1	1.2	82	100.0
10. Political science	21	16.4	28	21.9	34	26.6	45	35.1	.....	.....	128	100.0
11. Psychology	33	27.5	52	43.3	18	15.0	16	13.3	1	.8	120	99.9
12. Sociology	9	10.1	22	24.7	18	20.2	40	45.0	.....	.....	89	100.0
13. Spanish	33	42.9	23	29.8	15	19.5	6	7.8	.....	.....	77	100.0
Subjects 1, 3, 4, 6, 7, 8, 9, 13	638	45.4	363	25.8	252	18.0	141	10.1	10	0.7	1,404	100.0
Subjects 2, 5, 10, 11, 12	80	16.9	132	27.8	95	20.1	165	34.8	2	.4	474	100.0
All subjects	718	38.2	495	26.4	347	18.5	306	16.3	12	0.6	1,878	100.0

increase with the degree of tie-up in organization of high-school and junior-college years, from separate two-year units, to associations, to four-year units. Correspondingly, the percentages with the lesser measure decrease with the degree of tie-up. The trend is no less consistent when the proportions of

The superiority of specialized preparation of the instructors in the associations and the four-year units reflected in these percentages is directly attributable to the greater frequency of dual-level teaching in these organizations than in the separate junior colleges. It is a superiority hardly to be spurned

TABLE 8.—NUMBERS AND PERCENTAGES OF TEACHERS IN JUNIOR COLLEGES WITH ENROLMENTS, UNDER 200 OF THE THREE DIFFERENT TYPES OF ORGANIZATION HAVING (1) MAJORS OR (2) MINORS OR LESS IN PREPARATION FOR THE SUBJECTS THEY WERE TEACHING

Subject Group and Type of Organization	Majors in Some Com- bination		Minors or Less		No Answer		Total	
	Num- ber	Per Cent	Num- ber	Per Cent	Num- ber	Per Cent	Num- ber	Per Cent
Group A:								
Separate two-year	33	70.2	14	29.8	.....	.....	47	100.0
Association	104	74.3	34	24.3	2	1.4	140	100.0
Four-year	42	82.3	8	15.7	1	2.0	51	100.0
Group B:								
Separate two-year	7	36.8	12	63.2	.....	.....	19	100.0
Association	20	40.8	29	59.2	.....	.....	49	100.0
Four-year	6	50.0	6	50.0	.....	.....	12	100.0
Groups A and B combined:								
Separate two-year	40	60.6	26	39.4	.....	.....	66	100.0
Association	124	65.6	63	33.3	2	1.1	189	100.0
Four-year	48	76.2	14	22.2	1	1.6	63	100.0

teachers in all subjects represented are computed, as may be seen by comparing the last three rows of figures with the six rows above them. For all the comparisons, the interval between associations and four-year units is approximately twice that between separate units and associations—a tendency suggesting accentuation of the advantage inhering in these differences with the degree of integration in organization.

especially when joined with other demonstrated advantages of associations and four-year integrations over separate two-year units.

Two Major Implications

Although some readers may deem it desirable to recapitulate the findings from the several lines of evidence that have been presented in the foregoing pages, limitations of space will preclude doing so. Nor is it possible to set down here the

many implications, large and small, that emanate from such a study. The most that can and will be done is to state the two major implications for preparation of teachers for junior colleges that emerge without forcing. Implications for organizing and administering junior colleges, although important, are omitted.

One of these implications is that academic instructors in local public junior colleges, without sacrifice of depth in scholarship, should be equipped to teach more broadly than in a single subject. Put in traditional terms, this means that junior-college teachers should be prepared to teach at least two related subjects and, probably in some areas, even more. Even though some teachers in large junior colleges ultimately attain to positions in which they give instruction in a single narrow specialty, this is not typical of junior colleges generally, and ordinarily the instructor during his career must spend a period of years in teaching more than one subject. Put in terms of recent curriculum developments at the junior-college level, which include a marked movement toward survey and other general courses, it means that teachers should be prepared to give instruction in broad areas, such as social sciences, biological science, and the humanities.

The second of these implications is that junior-college instructors

should be prepared to teach at both high-school and junior-college levels—at least, through the later high-school and the junior-college years. At a time when most local public junior colleges are organized in association with high schools and others are striving to integrate later high-school and junior-college years into four-year units and when most junior-college teachers actually carry assignments at both levels, it seems a shortsighted policy to do anything else than to regard the later high-school and junior-college years as a continuous period of education, which will be best served by teachers prepared to give competent instruction throughout that period.

These two implications are readily generalized into a single composite recommendation that junior-college teachers be prepared both for an instructional service broader in scope horizontally and for a vertical range comprehensive of later high-school and early college years. By following this inclusive recommendation, higher institutions mapping out programs of junior-college teacher preparation not only will be meeting realistically the actual situation now being faced by junior-college teachers but will be fitting the prospective teacher for responsibilities in an emerging organization of American education at this level.

Using the Panel Discussion Method

J. H. GAISER

AS COLLEGE teachers, we are constantly searching for new methods to add "life" to the classroom. From time to time we hit on a new idea which seems to our pedagogical minds to be an innovation. Students, however, fail at times to react as we do, and our new discovery may not prove feasible. Occasionally, by some happy circumstance or combination of circumstances, we find a class project that "clicks" and proves highly successful. Such a procedure we like to share with others, since it may be used in a variety of situations.

The following account describes a project carried out in a Freshman survey course called "Backgrounds of Social Science" in the Junior College Division of the Eastern Oregon College of Education, during the spring quarter of 1943 and in other classes during the years 1943-47.

The Innovating Project

At the beginning of the term in March, 1943, I suggested to my

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class that a substitute might be found to replace the usual "term paper." The class of thirty-six members received the proposal almost too joyfully! (Perhaps the term papers of the previous two quarters still brought twinges of writer's cramp.) The further suggestion was that the class might carry out a series of panel discussions on a general topic chosen by the students but related to the field of study for the term.

The first class session was turned into a parliamentary meeting to choose a subject and to organize panel groups. Ideas came fast, but "war" dominated them all. Finally, a young man, who was soon to be inducted into the armed forces, remarked, "We can't fight the war here in the classroom; let's talk about what's coming *after* the war." This suggestion took hold, and the subject was formulated under the title "Democracy in the Postwar World." The class was then allowed time to form itself into groups, three members in each.

After electing a chairman, each of the twelve panels chose a subtopic related to the general subject. In individual meetings the subjects

listed below were chosen. Discussions on the meaning of "democracy" had already taken place in previous class meetings in the winter term.

Political Structure of the Postwar
International Setup

Postwar Foreign Trade

Reconstruction of the War-torn
Nations

Christianity (Religion) after the
War

A Permanent Court for the Postwar
World

The Family's Functions in the New
World Order

Immigration, Naturalization, and
Citizenship in the Postwar Era

The Place of Co-operatives in the
New Era

Education and the Schools in the
Postwar Era

The Common Man in the New
World Era

Postwar Prices

Postwar Economic Security

The date on which each group was to deliver its panel discussion was scheduled in advance. Between these presentations regular class work continued. In only a few instances was it necessary to postpone a panel, and then because of unavoidable absence of a member. When the day for a panel report arrived, the chairman presented his two colleagues and himself. Each then delivered his subdivision of the topic, speaking from notes. The chairman interjected brief remarks of a summarizing and transitional nature between the separate talks.

The three members sat at a table facing the audience, thus commanding class attention. Each presentation took a fifty-five-minute class period, the last fifteen or twenty minutes of which were devoted to questions from the audience. In every instance it was found that this general forum period was too brief to give time for the ideas raised by class members. Questions came fast and were discussed by both panel members and audience. Most of the points raised were challenges rather than questions of fact, because of the nature of the topic under consideration. The instructor was present but took no part in the discussion except when called on to act as umpire on a disputed point during the question period. In most instances he was also called on for a two- or three-minute summary and critical analysis of the three talks.

It is impossible in a brief article to give much more of the actual content of the discussions than the topic titles themselves. Sufficient to say that, in the course of the research and the presentation before the class, the work done more than met the instructor's expectations. Excellent materials were discovered in the college and city libraries. Questions were raised, some of which could not be answered completely. Written outlines of the topics discussed, together with a bibliography, were turned in to the

instructor by the respective chairmen after the panel presentations. Previous instructions on fact-finding, interpretation and evaluation of facts and opinions, and the drawing of conclusions (and predictions) were carefully followed in all cases, and the written outlines carried out this sequence. The whole experiment proved stimulating for both students and instructor. Some students, of course, delivered more finished talks than others, but in no case did a panel group fail to give what the instructor deemed a satisfactory performance. The classroom reactions and questions of the audience testified to the same conclusion from the students' viewpoint.

Values in the Panel Method

A few summarizing points regarding this panel series will bring out the teaching values and further possibilities of a similar series when used by teachers in other situations.

1. The general topic (chosen by the class itself) had vitality and up-to-dateness. "Postwar" was in the air, the press, the casual conversation in the home and on the street, on the campus. The fortunes of the United Nations were in the ascendancy. Daily headlines told of victories in North Africa and in the Far East. Next, perhaps, would come final victory and the long job of postwar adjustment. These young people realized that they

would have a big part in the postwar problems and in their solutions. The entire topic was based on the premise of a victory of the democracies over the totalitarian dictatorships, after which the socioeconomic and political institutions of the United Nations must help tackle the big job of world peace and order.

2. The class had sufficient background to understand and to develop logically, though not completely, the topics chosen. In the two previous terms they had surveyed certain backgrounds of civilization. Topics covered in those months by means of textbooks, extensive library reading, and class recitation included "Principles and Theories Relating to the Development of Civilization," "The Meaning of Culture," "Survey of Ancient, Medieval, and Modern Civilizations," and "Introduction to Modern Social Organization and Institutions." The last-named topic gave enough consideration to political, economic, educational, and religious institutions to familiarize the student with modern trends. More reading along this line continued on days between panel presentations. After studying past civilizations, the class felt that the study of present and future events was only logical. These students were already familiar with materials in the library. It remained for them to *select* the best materials

for their topics rather than to learn *how* to find the subjects in a card or magazine index.

3. Students felt at ease in the group. This class had been together for almost a complete school year. They knew one another and their instructor. They had discussed many questions concerning the topics of study and related subjects of general human interest. The subjects and questions in the classroom had been live ones, calling often for spontaneous discussion, quick give-and-take on debatable issues. The moderate size of the class (thirty-six members) also aided in this group participation and in the feeling of group unity and solidarity.

4. The panel method offered each student the opportunity to satisfy his "desire for recognition," and this in co-operation with two other class members with whom he had voluntarily associated himself. Being Freshmen, many of the students had done little public speaking before this time, but here they were stimulated to prepare and deliver a topic with others to help bolster them and their morale. The series also brought out a mild competitive element in students in vying with one another and with the other groups.

5. The series brought about a situation which helped to "self-inspire" a more thorough spirit of Americanization and a world-community outlook. A review of some

of America's fundamental institutions and their postwar possibilities for the world brought to the individual students a more thorough appreciation of certain elements of our democracy. The remark by one of the panel members, "We already have functioning institutions in our country; let's make better use of them from now on and in the postwar period," is typical of the general attitude. Critical analyses of our failure to bring the activities of our institutions to a realistic democratic "one world" stage of development were frequent in the discussions and in the questions and ideas contributed by the class audience.

Possibilities of Extended Use

It is not my purpose to draw broad generalizations from this experiment. However, I believe the results proved that the panel method can be advantageously used in a college class to gain a more complete, a more congenial, and a more thoroughly democratic participation of students on timely questions of social significance. Sufficient background in reading and library research can also make the panel method a pleasurable and lively one for the entire group. Research carried out on a unified topic in co-operation with others can, in addition, bring benefits in logical presentation of materials, in both written and oral form. The challenging questions and comments

that come from the audience aid in developing the critical faculties of the entire class under fire by their colleagues.

A few words more may be added to this review of a college classroom technique in comment on the question: How can this method be used in other situations and at other times?

The writer has continued the same procedure since 1943 in classes on world problems in political geography, international relations, and, to some extent, in general classes in economics and sociology. In successive years the panel discussions have centered in international happenings, such as the Dumbarton Oaks conference, the San Francisco conference, the Bretton Woods proposals, the United Nations organization, and democracy in the atomic age. Into the present year of 1947, a cen-

tral or nuclear international theme has enlisted the enthusiasm of the participants as did the original topic at a time when "victory and postwar" were in the air.

The best of these panels have been presented before various groups, such as parent-teachers' associations and clubs in this region of eastern Oregon, and over the local radio station. The response of the audiences has been enthusiastic. Such public presentation has given an added incentive to the panel members to bring their discussions to a high level of clarity and general interest.

In conclusion, then, the writer hopes that this method may offer many college teachers like himself a profitable supplement to other classroom techniques—one which may also prove valuable as a means of adult education and enlightenment in the general community.

Junior-College World

JESSE P. BOGUE

Executive Secretary

PHI DELTA KAPPA WORKSHOP

When it became apparent that Teachers College, Columbia University, New York, would not sponsor a junior-college workshop, Beta Chapter of Phi Delta Kappa planned and carried through a program at the College. The main lectures in the series were given by Lawrence L. Jarvie, associate commissioner of education of New York State; Edward G. Schlafer, dean of Monmouth Junior College, New Jersey; and Theodore H. Wilson, president of the University of Baltimore Junior College, Maryland. Others who took part in the panel discussions were: Dr. Hollis L. Caswell, Dr. Frank W. Cyr, Dr. Edward S. Evenden, Dr. Hamden L. Forkner, Dr. Will French, Mr. Roland W. Grinstead, Dr. Wilbur C. Hallenbeck, Dr. Arthur V. Linden, and Dr. Gordon N. Mackenzie.

The following are some of the problems which were attacked:

If in ten years, two million or three million students will be enrolled in junior colleges, as some predict, won't a complete readjustment of our educational program be called for?

Won't the patterns set by commu-

nity junior-college teachers become the most influential force, for good or ill, in the changing or the conserving of curriculum patterns in the high school?

If a large adult group is included, won't the whole life of many communities be radically changed?

Won't the great issue in post-secondary general education then be the relative value of the "generalized" general education of the arts college, whose students come from many communities and disperse to many communities (often not the localities they came from), and the general education of the community institute, in which the education can be applied almost immediately in community context, since the students come from the community and expect to continue to live in it?

Won't all this result in a shift of emphasis in Teachers College, to give great emphasis to this new cutting-edge in education, and perhaps differentiate even more than at present the work of academic graduate schools and professional graduate schools?

Doesn't the trend to set up junior colleges in undergraduate teachers' colleges (approved by Conant) suggest that graduate professional schools of education should recognize added responsibility for working in the junior-college field? Two related consequences may be foreseen: (1) a larger and improved group of students from whom prospective teachers may be chosen and (2) increased support and prestige for teachers' colleges.

Beta Chapter is to be commended for leading this movement at Teachers College. Perhaps—and let us hope so—another year may see the establishment of full-scale summer workshops at some of the great eastern universities.

FUTURE CAMPUS WILL COVER COMMUNITY

The campus of the junior college of the future will cover the entire community, J. W. Harbeson, principal of the Pasadena Junior College, California, predicts, according to a report in the *News-Gazette of Champaign, Illinois*:

The future junior college will increasingly become an educational and cultural center of the entire community. Education will be recognized as a continuous, lifelong process, and the distinction between regular and adult education will disappear. The future junior college will become a service center for out-of-school youth as well as for the youth enrolled.

He also predicts an extensive increase in co-operative and vocational education, greatly increased expenditures because of the pressure of economic conditions, an ascendancy of intramural over intercollegiate athletics, and less investment of money in buildings, but more in trained faculty members.

Traditional curriculum patterns will be discarded, and offerings will be adapted to the growth needs of the students enrolled. There will be greater

emphasis on work experience, but credit for graduation will only be granted where it is related to the student's vocational choice and is supervised by a school work co-ordinator.

The adaptation of a junior-college program to present-day needs would require a core program of general education for all, a university-preparatory curriculum, and vocational curriculums for terminal students.

Dr. Harbeson taught the junior-college course at the University of Illinois during the past summer. He is co-author with Dr. John A. Sexson of *The New American College*, a past president of the American Association of Junior Colleges, and presently a member of the Committee on Curriculum and Adult Education.

UNIVERSITY OF BRIDGEPORT

The University of Bridgeport, which was founded in 1927 as the Junior College of Connecticut, opened the fall term with upper-level courses in the College of Liberal Arts and Sciences and the College of Business Administration with a registration exceeding last year's record-breaking total of 2,053.

The Junior College of Connecticut, which is a unit of the University, observed its twentieth anniversary last June. A community-wide observance of the anniversary continued for an entire

week and was climaxed by a charter-night dinner, at which James C. Shannon of Bridgeport, lieutenant-governor of Connecticut, presented to H. Almon Chaffee, chairman of the Board of Trustees, the charter of the University of Bridgeport, passed by the General Assembly of Connecticut and signed by Governor James L. McConaughy. Educators of national and state-wide prominence participated in the twentieth anniversary events.

In connection with the expansion of the Junior College of Connecticut into the University of Bridgeport, several steps already have been completed which will ultimately result in a new campus adjoining Bridgeport's famous Seaside Park. During the 1946-47 academic year, two buildings which had been acquired on the new campus, one of them once the mansion of P. T. Barnum, world-famous showman, were occupied for dormitories.

On July 9 a ceremony was held on the new campus marking the laying of the cornerstone of a new classroom-library building, which was completed for occupancy in September. Another building was remodeled on the new campus for laboratories. Another new building, containing twenty-five thousand feet of floor space, consists of two stories and includes library seating for three hundred persons, stock-room, periodical and reference room, twelve large classrooms, a

large general biological laboratory, an advanced laboratory, preparation room for biology, and offices for the deans of the College of Liberal Arts and Sciences and the College of Business Administration, a reception office, faculty office, and locker-rooms.

James H. Halsey, president of the University of Bridgeport, has announced the appointment of Dr. Boone D. Tillet as dean of the College of Business Administration; Dr. Clarence D. L. Ropp as dean of the College of Liberal Arts and Sciences; and Dr. Harry A. Becker as dean of the Junior College of Connecticut, dean of administration, and director of the evening session.

The University has acquired two additional large residences on the campus. These are being used for dormitory purposes, in addition to Barnum Hall and Seaside Hall, which were occupied as dormitories during the past academic year, and Fremont House, which the Junior College of Connecticut acquired several years ago for this purpose.

In preparing curriculums for the upper-level courses, the Curriculum Committee of the University of Bridgeport had the advice and counsel of the deans of several of the well-known colleges and universities in the East. Additions have been made to the faculty to take care of the expansion in courses as well as the increased registration.

The University of Bridgeport is another example of senior institutions with definitely organized junior-college departments. Others recently organized or activated are the General College of Boston University; Peoria Junior College of Bradley University, Illinois; and the Junior College of the University of Denver.

EL CAMINO COLLEGE

El Camino Junior College District was established officially on July 1, 1947. El Camino College, Lawndale, California, is the junior college in this district. Last year, junior-college classes were attached to Centinela Valley Union High School, Redondo High School, and El Segundo High School. These have been absorbed by El Camino College.

The college has an eighty-acre site, on which temporary buildings have been moved. They will be brought up to schoolhouse standards, and it is anticipated that they will be in use at the beginning of the second semester this year. At the present time El Camino College is conducting its classes from 3:30 to 9:30 P.M., in Adolph Leuzinger High School, which is near the center of the Junior College District. The first week's enrolment was 862.

Forrest G. Murdock is the president. The college has become a member of the American Association of Junior Colleges.

WEBER COLLEGE SUPPORTERS UNTIE PURSE STRINGS

Aware of the college's bulging walls and crammed classrooms, residents of the Ogden (Utah) metropolitan area untied purse strings and donated \$62,000 to give Ogden the start it needed to secure the college it requires. President Henry A. Dixon says:

Weber takes its hat off to Lou Griffin and the effective organization of men and women which collected more than \$50,000 in the record time of eight working days. They did not stop when the pledge to match the legislature's appropriation was met, for they have now gone \$11,000 beyond the goal with collections still coming in at a lively rate.

Behind the development-fund drive, I see values that mean even more to Weber than the money. Some of these values include: legislative support by the state through its appropriation of \$50,000 by an almost unanimous vote indicating its support of the expansion program; an alerted community ready to go all-out for a college worthy of the size and ideals characterized by Utah's second largest city; a 175-acre site which for beauty, location, and serviceability outranks anything in the West; and land upon which we can build all new structures designed to serve the modern needs of a progressive institution of higher learning. Without the development-fund drive, none of these blessings could have been realized.

The next step in the program for a Weber comparable to the community spirit and support is the

allocation of funds by the state for the employment of architects and a firm of landscape artists to assemble a master-plan for the campus and plans for the key building of the campus. After completion of the necessary planning and drafting of the required arrangement and facilities, it will be the job of the state legislature to appropriate funds for the construction of a \$700,000 classroom and administrative building and a heating plant that will cost \$25,000.

UNIVERSITY SYSTEM CENTER

When Dr. Studebaker, of the United States Office of Education, requested his staff to select three college centers as subjects for expert study and academic exploration in college education for metropolitan centers, they chose the University System Center in Atlanta, Georgia, as one of the three. The six-story college building is in the heart of Atlanta, between the financial district and the governmental center. In line with the present practice at nine-tenths of the American colleges and universities, this school admits men and women alike.

Day Division classes are held Monday through Friday each week under the same system in operation in any standard college. Classes are held for fifty minutes, with ten-minute intermissions, beginning at 9:00 A.M. and continuing until 5:00

P.M. The schedule of courses in the Evening Division is arranged for the benefit of students who are working. In order to give the evening student as much time for preparation as possible, classes are arranged so that most students, who are working during the day, may attend only three evenings each week—Monday, Wednesday, and Friday. A few classes are held on Tuesday and Thursday evenings.

Many teachers now in service, wishing to better their training in order to improve their teaching, find University Center a means of securing further training without giving up a salaried position. Teachers may attend the Evening Division during the academic year or the Day Division summer college.

The University System Center's library, conveniently situated on two levels, the first floor and terrace, and possessing a collection of twenty thousand volumes, includes books on subjects within the scope of the program of reference and research, as well as many books for cultural and recreational reading. Other library facilities are the state library at the State Capitol (a short distance from the college building) and the Carnegie Library (a few blocks north of the college building) and its many branches which serve thousands of University System Center students.

EAST LOS ANGELES' NEW CAMPUS

East Los Angeles Junior College will occupy its great new campus at the end of the present semester. Nineteen temporary buildings will have been completed at that time. Addressing the students recently, Dr. Rosco C. Ingalls, the director, said:

Progress toward the new campus has been slowed down and delayed—not stopped. It has been steady and effective during the summer months. By Christmas time all temporary buildings should be completed, all utilities installed, and equipment delivered. We can plan now for moving-day at the end of this semester.

Obstacles must not be permitted to defeat us, individually or collectively, from attainment of defined objectives for this current semester. They will make it only a little more difficult to accomplish our purposes. Get acquainted with the spirit of the football team and the coaching staff as obstacles are hurdled. All others among us can follow this splendid example of high-quality spirit.

A record of achievement should be the objective for each of us now beginning the semester on this campus. This can be personal and individual. It may be altruistic and co-operative through teams and activities representing the college. It may be one or both. Together as we work, this will become, in deeds accomplished, a superior semester for our college.

Plans for the construction of permanent buildings on the new campus are being formulated in view of a two-million-dollar fund set aside by the Board of Education for permanent facilities at the Brooklyn-Atlantic site. Actual work on the buildings should commence in 1948 and continue through 1949.

Purchase of the thirty-eight-acre tract was completed last spring when the former Hellman estate cleared escrow. An offer by the federal government to move and instal at the new site three *H*-shaped buildings being used as barracks at the Army's Santa Ana air base was accepted immediately.

Recent Writings

Judging the New Books

JOHN R. MILES and CHARLES R.

SPAIN, for the Commission on Implications of Armed Services Educational Programs. *Audio-visual Aids in the Armed Services: Implications for American Education*. Washington: American Council on Education, 1947. Pp. xii + 96. \$1.25.

THROUGHOUT the war and the early postwar years, the educational implications of war training was an extremely popular subject for both professional and amateur writers. Champions of what seems to be a rather interesting variety of causes have found supporting data or experiences in the training activities of the armed services. Not the least of those who "point with pride" to the war training record have been the devotees of what has come to be called "audio-visual education." To provide the education profession with a sound and unbiased appraisal of the armed services audio-visual program, the Commission on Implications of Armed Services Educational Programs chose Dr. John R. Miles, of the Education Committee of the Chamber of Commerce of the United States, and Dr. Charles R. Spain, associate professor of educa-

tion at the University of Kentucky. Both men have served as officers of the United States Navy.

Audio-visual Aids in the Armed Services provides a description of the less verbal teaching materials and the techniques of their production and use by the Army and the Navy, with a list of eleven implications for civilian education derived by the authors from the military training program. In a sense, the armed services during the war years took over the responsibility of training the majority of American youth of junior-college age. The devices and the techniques used for this training are, of course, of particular interest to professional workers in the junior-college field, even though neither the means nor the objectives of military training are completely identical with those of general education.

The whole environment in which military training occurred, in fact, differs considerably from the typical junior-college atmosphere. In the first chapter of their book, Miles and Spain attempt to point out some of the differences. Among the characteristics considered peculiar to the development of military training are the almost unlimited

financial resources available, the tremendously rapid expansion in numbers of learners, the background of the trainees, the urgency of training, and military direction and controls. An additional difference might well have been described, namely, a lack of a long-term view on the part of both instructor and learner. Few indeed were the instructors who planned to make a career of military training. Generally the instructors were drawn either from the ranks of civilian educators and technical specialists, on the one hand, or from seasoned campaigners from the battlefield, on the other. In either case, the position as instructor was usually looked on as a temporary one. As for the trainees, one need only to observe the present recruiting program of the Army, Navy, and Marine Corps to realize that few inductees or volunteers viewed their training as the first step toward a military career. The lack of a long-term view on the part of both instructors and learners could hardly fail to have an effect on the operation of the training-aids program.

The types of training aids used in the armed forces are described in the second chapter of the brochure. To many educators "training aids" or "audio-visual aids" are terms that are generally synonymous with moving pictures. Miles and Spain help to correct this error by point-

ing out that the armed services also used graphics, posters, informal learning, demonstrations, "realistic" training, mock-ups, models, "bread boards," and nonpictorial projected aids. Chapter ii might have been made more helpful to civilian educators if the authors had related the types of materials used in military training somewhat more closely to their possible application in general education. Of particular interest to junior-college teachers of science and foreign language are the descriptions of the Navy "visual aid projector and vectograph equipment" and of the use of recordings for foreign-language instruction found on pages 26 and 32.

Two ideas stand out in the section on production and distribution: (1) the desirability of co-ordinating facilities for originating, planning, and producing instructional materials and (2) the fact that the distribution of training materials is closely linked with utilization. A third point which is strongly emphasized by the authors is the necessity for decentralization of distribution:

Library systems [brought] the estimated proper number of prints of a film into the area library nearest to the classrooms which needed them, including those on ships at sea or advanced bases overseas. The "right film at the right place at the right time" was the primary objective [p. 47].

In *Audio-visual Aids in the Armed Services* more space is de-

voted to the utilization and effectiveness of training aids in the armed services than to any other subject. Means of supervising the training-aids program, the extent to which various types of materials were used, and the attempt of the armed forces to appraise the usefulness of training aids are dealt with rather fully. However, in introducing the subject of the utilization and effectiveness of training aids, the authors state that most servicemen felt "pressure 'to be ready'" and "utilization of training materials must, therefore, be considered always in the light of this tendency of students to want to learn." Judging from his service experience within the continental limits and overseas, the reviewer is of the opinion that the imminence of combat stimulated learning in formal training situations in only a small minority of men. The fact that progressively more intrinsic and extrinsic motivation was "built into" films and other devices as the war progressed lends support to this thesis. Had the officers in charge of training realized clearly the implications of the extent of frustration experienced by the individual trainee, and the ineffectiveness of the prospect of armed combat as motivation for learning, the whole military training program might have been somewhat different.

Somewhat less than 25 per cent of the pages of *Audio-visual Aids in*

the Armed Services is devoted to a discussion of the implications of military audio-visual programs for civilian education. If it is granted that the military experience with audio-visual materials was mainly a lavish implementation of pre-war civilian "know-how," then the eleven implications should read just as they do: like the results of a survey of pre-war literature on audio-visual aids to instruction. However, it is hard to believe that the highly trained and competent psychologists and educators who contributed so freely of their energy and intellect could work through four or more years of war without making some original contributions to the field of instructional materials. Perhaps the authors have been preoccupied with determining the static pattern of the training program in the armed services and have not, therefore, been sensitive to the meaning of its dynamic aspects.

Implication 3 states that "multi-sensory instructional materials should be conceived as aids rather than as self-contained teaching devices" (p. 79). On the contrary, a study of the type of training aids produced for the military seems to indicate that a decreasing degree of reliance was placed on the skill of the military instructors. A case in point is the production of moving pictures, which, as the war drew to a close, more and more frequently

included introductory or summary sequences, emotional and motivational appeals, sequences strongly suggesting specific reactions by the viewer, and the like. Each such addition, in a sense, involves a usurpation of the prerogatives of the highly skilled instructor and brings the film somewhat closer to being a "self-contained teaching device." In view of the lamentable exodus of highly trained civilian teachers from the profession, it may be fruitful for civilian educators to attempt to push somewhat farther along these lines pioneered by the military.

Few educators will quarrel with the statement that multi-sensory materials "should be employed in general education as well as technical and vocational training" (p. 82). It might well be emphasized, however, that both the Army and the Navy were primarily concerned in their training courses with the development of skills, whereas emotional and attitudinal learning presumably have greater relative importance in general education. Furthermore, when the Army and Navy turned their attention to the development of attitudes and values, they frankly sought materials and techniques which would indoctrinate. The exigencies of war, if not the inherent characteristics of the professional soldier, would hardly permit a wide range of individual choice of attitudes and be-

liefs based on the sober reflections of each fighter. It is the hope, however, that, in the schools and colleges of a democracy at peace, somewhat more of the intellectual and somewhat less of the emotional will be utilized in the formation of attitudes and values.

In connection with the production of training films and many other types of devices, it is surprising to note the following statement among the authors' conclusions: "The implication from the services is, then, that the aids more difficult to produce can be made *for*, but not *by*, the local school" (p. 89). For the most part, only the earlier films were made *for*, not *by*, the Army and the Navy. Both branches of the service drew heavily on trained civilian personnel to form their own production units. In the majority of cases such civilians were placed in uniform either as commissioned officers or as enlisted men with specialist ratings, and, as such, they became part of what was definitely a military production unit.

It is indeed true that the average public-school system can hardly afford, at present prices, the equipment or the technical personnel required to produce sound moving pictures that meet the standards of excellence demanded by students and teachers. This fact, however, does not preclude the possibility of participation by school people in such production. On the contrary,

as the authors state: "Improvement of instruction through the use of a variety of instructional materials can be effected by local ingenuity and initiative." It is to be hoped that as junior-college instructors become more experienced in the utilization of multi-sensory teaching materials, they will be stimulated to take a hand in production. Important phases of production in which they can and should participate are the writing of scripts; the outlining of general specifications; the suggestion of analogies, examples, and applications of verbalized concepts; and the provision of provocative story ideas and "treatments." Essential to good training materials production is real teamwork between the technician, with his mechanical and artistic skill, and the instructor, with his grasp of subject matter and of principles of teaching. To insist that even complicated teaching materials must be made for, not by, schools is to relegate an essential member of the production team to the side lines.

On the whole, Miles and Spain have done a monumental piece of work in combining information from a wide variety of sources into a single usable booklet. *Audio-visual Aids in the Armed Services* is sufficiently comprehensive for the general educator, and yet it provides adequate source data for the reader who may wish to pursue the

study more comprehensively. The bibliography and footnotes contain about forty military references, some of which would be difficult for the average civilian investigator to discover from the usual bibliographical sources.

The evidence for the publication was gathered from an imposing variety of sources: interviews with liaison officers from the War and Navy Departments, military research studies, histories of war training programs, visits to military training centers, questionnaire forms returned by enlisted men, service orders, directives and memorandums, courses of study, actual training aids and devices, and interviews with service instructors. The only source of information bearing on the subject that was apparently left untapped by the authors was the lower echelons of training-aids distribution and utilization officers in the Navy, and their counterparts in the other services. While these individuals rarely did any classroom teaching, they were charged with the responsibility of promoting wider and more effective use of training aids, and they might have contributed some worth-while insights into the program.

The instructor or the administrator who is searching for promising ideas for teaching materials that may supplement or perhaps even partially replace the relatively abstract verbal materials most com-

monly used will find that *Audio-visual Aids in the Armed Services* contains much to stimulate creative thinking. Those who seek evidence to support sound programs of instructional materials will be helped by many of the authors' eleven

"Implications for American Education," and especially by the chapters on production and distribution and on utilization and effectiveness.

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Selected References

S. V. MARTORANA

McCoy, JOHN H. "Santa Ana Builds a New College Campus," *American School Board Journal*, CXV (August, 1947), 36-38, 60.

Describes the modern junior-college campus being built at Santa Ana, California. The construction was begun in February, 1947, and terminated a fourteen-year campaign to secure improved facilities for the college. Opened in 1915, college classes were held in buildings located at Santa Ana Senior High School until the earthquake of 1933 demolished the buildings. Since then the college has been housed in temporary buildings in the heart of the city. The junior-college district was formed in 1922. During its thirty-two years of service the college has enrolled more than twenty-three thousand students and has built a high scholastic reputation.

Following defeat of a bond issue in 1938, the next seven-year period was used to build public opinion and to secure additional support for the college. Members of the Board of Trustees were instrumental in planning for a new campus and a second bond issue, which won approval at the polls in October, 1945. Amounting to almost a million dollars, the bonds will enable the college to complete work on the first units of a campus which will ultimately become a \$2,500,000 plant. Passage of the bond issue by a vote of about three to one brought in a new era in Orange County education, as the Santa Ana project attracted wide attention throughout Southern

California. Featured in the public-relations program conducted for the bond drive were a brochure circulated prior to the election and a model of the new campus, depicting the proposed buildings and site layout in miniature, which was placed on display in downtown store windows prior to the election. The support of the weekly paper was helpful in bringing about the success of the drive.

The first units to be constructed will include an administration building, a cafeteria, physical-education facilities, locker rooms, and a large classroom structure providing some twenty rooms. Ten buildings, secured from the near-by Santa Ana Army Air Base, will be converted and redesigned for use as science and shop buildings. One of the Army's buildings will be remodeled for the college library of more than fifteen thousand volumes. Tentative plans call for a gymnasium, with a seating capacity of twelve hundred, to be built at a later date. The first of the new units of the college were to be ready for occupancy in September, 1947. The curriculum will be expanded as the new facilities are completed and as additional units are added. Tentative outlines have already been prepared for the development of an agriculture division as well as new terminal classes.

Realizing that the expanded program will attract hundreds of new students from a wide area, the school administrators are of the opinion that the future responsibilities of the

institution will include many new phases of activity not previously provided. The preliminary draft of the objectives of the new expanded program includes: continuance of the aim to serve on-coming high-school graduates; courses for veterans of all ages; courses for displaced workers; courses for other adults; continuance of an evening division; reorganization of the engineering division; development of studies in agriculture; development of complete units in gasoline and Diesel engines; development of programs in music, drama, and speech; enlargement of the department of home economics; development of a program in recreational leadership; and reorganization of the department of commercial education.

In the future the campus facilities offered in the proposed auditorium, student union building, cafeteria, and swimming pool will be used for community cultural and recreational centers when not required for school purposes.

Our Graduates and What They Do—A Follow-up Study. New Haven, Connecticut: New Haven YMCA Junior College, 1947. Pp. 21.

Reports a survey intended to evaluate the work-study program of the New Haven YMCA Junior College. Operating on the assumption that the majority of its graduates will not continue with formal study elsewhere, the College attempts to prepare students for technical-professional and administrative positions in the fields of industry and business. "The Work-Study Program is based upon the educational principle that study related to the student's daily work experience is more effective than study which is not so related." The survey sought information relative to the kinds of positions held by graduates of the College, the relationship between positions held by the graduates and the programs of studies completed at the College, the proportion of graduates transferring to other institutions, and the extent to which these institutions grant credit for courses completed at the College. Inquiry forms were returned by 151 of the 355 graduates for whom addresses were available.

The survey revealed that 64 per cent of the graduates of the College hold related technical-professional, supervisory, or executive positions within five years after graduation and that 82 per cent of those who graduated ten or more years ago are holding such positions. Before attending the College, only 18 per cent of the graduates were employed in positions related to their prospective programs of study; the remainder were either holding unrelated positions or were not employed at all as in the case of students who had just completed high school.

"The percentage of graduates remaining in positions related to their field of study is justification in one form for the high degree of specialization provided by the work-study program." Furthermore, the percentage of graduates holding positions classified in the study as executive, supervisory, or technical-professional in nature is held to justify the policy of providing vocational preparation for technical-professional positions and to justify the recent introduction of a "management division" for those students who seek to become supervisors and executives.

"Of greatest significance, in so far as the work-study philosophy of the College is concerned, is the trend indicated by the percentage holding positions unrelated to their programs of study. It will be noted that prior to attending the College 82 per cent of the graduates were holding positions which were not related to the field for which they wished to prepare themselves, or were not employed at all. During the period of college attendance this dropped to 21 per cent indicating that only one student out of five either had no opportunity to shift into a related field until after graduation, or was perhaps being overly cautious about burning his bridges behind him. It should also be pointed out that many of the graduates included in these statistics attended the College prior to the present policy of emphasizing the related work-study principle."

The trend toward specialization within industry which renders it imperative that an employee advance either in the direction of technical or administrative service, but not both, is presented as having much significance for the development of work-study programs;

for this tendency creates the problem of whether arrangements can and should be made to provide students with "double-barreled training for both technical-professional and supervisory-executive positions."

Although the program of the College is largely terminal in nature (fewer than 15 per cent of the graduates transfer to other institutions following graduation), the study also looked into the success of those graduates and students who do transfer. "It was both unexpected and gratifying to note that in very few cases was there any indication of 'junior-college prejudice' on the part of American colleges and universities. More than 50 per cent of the students who transferred to these institutions received full credit for all courses completed at the College, while practically all of the remainder received approximately full credit. For the most part, the cases of partial transfer credit refusal were based on the following conditions: (1) if the curriculum undertaken at the transfer institution was different from the one undertaken at New Haven YMCA Junior College. . . . (2) if the courses at the transfer institution were not similar in content or scope to the courses offered at the College; and (3) if the transfer student did not achieve high enough grades in his courses at the College to warrant transfer credit."

Concerning the second condition, the survey brought into focus a problem which is perhaps worthy of consideration, namely, the difficulty encountered by some students in getting transfer credit because the courses taken at New Haven YMCA Junior College did not carry the same number of semester-hours of credit as those in the transfer institution. The survey recommends further investigation of this problem even though it affects relatively few students.

PETERSON, BASIL H. "Junior College Education in California," *Sierra Educational News*, XLII (November, 1946), 16-17.

Reviews the contributions of the state of California and the California Junior College Federation to junior-college development in America. It is pointed out that, with the ex-

ception of the junior college, the American educational pattern has been primarily taken from foreign countries. "As an educational institution, the junior college was conceived in this country, and today occupies a position in American education of permanence and of significant accomplishment."

California has played a leading role in the junior-college movement. In 1945-46 this state led all other states, having 74 junior colleges, with 120,000 students enrolled. California has also been outstanding in developing the junior college as a public institution and as a community institution. To meet their varied obligations, the junior colleges in California provide five types of educational opportunities: semiprofessional training; pre-professional education; opportunities to remove high-school deficiencies; general and cultural education in a wide variety of fields; training to qualify veterans for high-school graduation, for industry, or for advanced study.

The California Junior College Federation (which has recently been superseded by a strong state association of junior colleges) had eight aims, intended to promote the general welfare of junior-college education: to develop desirable administrative practices and policies, to represent the junior college in relations with other organizational agencies, to promote desirable legislation, to encourage development of adequate offerings and instructional practices, to enable junior colleges to assume their rightful position in modern education, to co-operate with all levels of education, to encourage research and study of junior-college problems, and to collect and disseminate information to members of the federation. The article concludes with a brief résumé of the year's accomplishments by the federation in the areas of co-ordination of terminal and semi-professional curriculums in state colleges and junior colleges, accreditation of technical institute curriculums, junior-college standards, financial support for education in California, vocational education, and general education. Continued study will be made of the problems of athletics, public relations, and a more adequate basis for financing junior colleges.